Sterling Reporter

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

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National Weather Service Forecast Office Baltimore/Washington

Inside this issue:

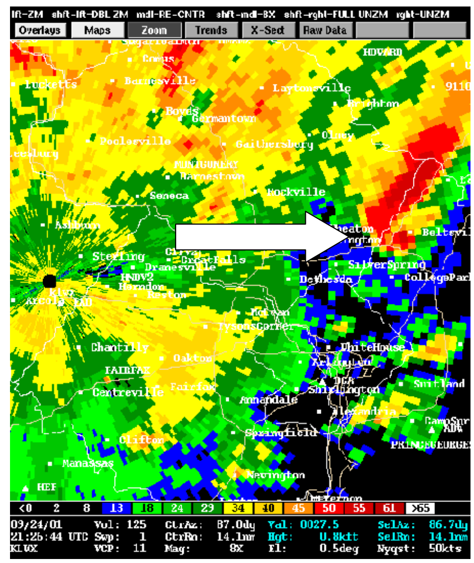
How Do Meteorologists Use Doppler Radar to Warn for Tornadoes?

By John Margraf, Information Technology Officer

Prior to the installation of the WSR-88D (Doppler) radar in the early 1990s, meteorologists had a very difficult time issuing tornado warnings. Occasionally, there would be a sign in the older radar images that indicated a possible tornado, but most of the time tornado warnings were not issued until a funnel cloud or a tornado was spotted and reported back to the National Weather Service.

The Doppler radar in use today gives meteorologists the opportunity to see tornadic development inside of a thunderstorm. This provides the meteorologists with the capability to issue a tornado warning before a tornado touches the ground, increasing the amount of time that people have to get themselves and their families to a safe location.

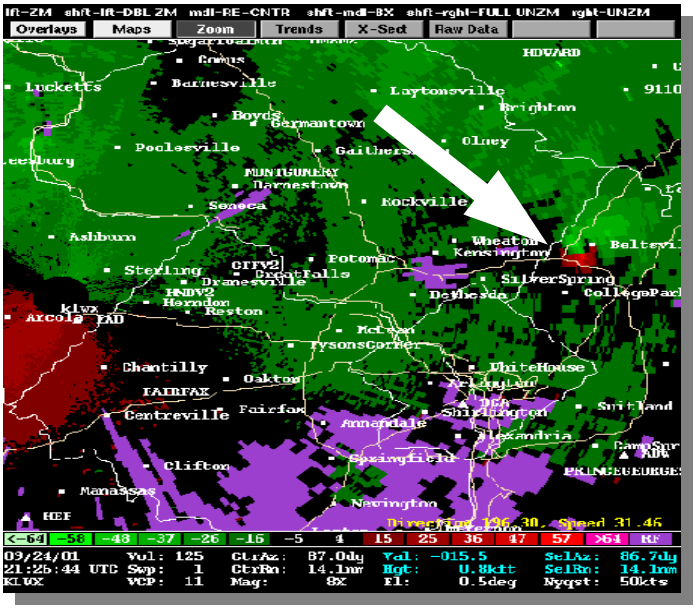
So, what do meteorologists look at to determine whether or not a tornado may occur? Our radar produces a number of different products that the forecasters have at their disposal. The most commonly used radar product is a reflectivity image, which is the standard image that most people see on TV or across the internet, displaying where the storms are located and how intense the precipitation is inside of the storms. There are some reflectivity signatures that help us determine if a storm could become tornadic, including the "hook echo" displayed on the image at top right. (this was the storm the produced a tornado in College Park, MD in Sept. 2001)



Another key radar product used for determining tornado potential is a velocity image. Our Doppler radar measures the shift in frequency between the transmitted signals and return signals, and transforms that information into a display of motion inside of thunderstorms. Forecasters can actually detect circulations inside of a storm. If a storm develops a deep, strong, persistent circulation (especially one with a strong rotation near the ground), this is a good indicator that a tornado may develop, and a warning will be issued.

A velocity image from the tornado that hit College Park last year is displayed on the next page. The shades of green indicate air motion toward the radar. The shades of red indicate motion away from the radar. The brighter shades of green and red indicate the stronger velocity readings. In this image, just to the north of College Park (on the far right side of the image), you will see a couplet of strong motion toward the radar and strong motion away from the radar (a bright green next to a bright red). This is an indication of a strong rotation

How Do Meteorologists Use Doppler Radar to Warn for Tornadoes? (Continued from Pg. 1)



near the surface, and when this information is combined with data from our other radar products, we have a strong indication that a tornado will occur with this storm.

The doppler radar installed here at Sterling in the early 1990s, and others like it across the country, have provided NWS meteorologists with the information necessary to issue timely, accurate tornado warnings, with enough lead time for you and your family to find a safe place during these dangerous storms. When a tornado warning is issued, make sure you pay close attention to the path of the storm, and follow the safety instructions that are given out on NOAA weather radio or by the other local media outlets.

What do meteorologists look at to determine whether or not a tornado may occur?

Regional Weather Review

by Michelle Margraf, Forecaster

Here's a list of weather events that had an impact on our region in March and April of 2002. This information is compiled from reports from volunteer and co-op weather observers, SKYWARN spotters, county and state officials, and automated weather observations. This information is included in the National Weather Service's monthly publication, *Storm Data and Unusual Weather Phenomenon*.

March 2002

9th-10th: A strong cold front which crossed the region late on the 9th was accompanied by strong gusty northwest winds. Some locations just east of the Appalachian Mountain ridges reported downed trees and power lines in addition to some structural damage. In Mineral County, West Virginia, a wind sensor on the top of a 75-foot tower in Keyser recorded a wind gust of 69 MPH at 10:30 PM on the 9th and 62 MPH at 4 AM on the 10th. In the northern Mineral County community of Ridgeley, the high winds caused moderate structural damage. The slanted roof of a two-story apartment building was partially ripped off. In Allegany County, a number of trees were downed, awnings were damaged, and signs were broken.

17th: Light rain fell across Allegany County, Maryland during the afternoon and early evening. . At elevations above 1500 feet, surface temperatures were just below freezing for much of the day so the rain froze on contact with sidewalks, metal objects, and trees. Accumulations of up to 1/8 of an inch were reported just outside of Frostburg.

21st and 22nd: A strong arctic cold front pushed through the region during the evening of the 21st. This front ushered in strong northwest winds that gusted as high as 59 MPH east of the mountains. The highest winds occurred between 6 PM and 11 PM, but gusty conditions continued through 4 AM on the 22nd. Minor structural damage was reported in isolated locations, in addition to downed trees and power lines.

April 2002

18th: Scattered thunderstorms developed during the early afternoon across Northern Virginia and Central Maryland. Some of the storms produced damaging winds, very heavy downpours, and frequent lightning. In Greene County, a handful of lighting fires were reported. In Albemarle County, lighting started at least 7 brush fires. In Orange County, lightning started an attic fire at an apartment

Regional Weather Review (Continued from Pg.2)

building. In Spotsylvania County, two homes were damaged by lighting fires and scattered trees and power lines were downed. Heavy downpours flooded roads in Fredericksburg. In Alexandria, a lightning fire damaged an apartment building. In Anne Arundel County, lighting struck at least 10 homes, caused 35,000 power outages, and started five brush fires. High winds blew through open roll-up doors on the front of an industrial building and the resulting pressure blew out a portion of a concrete wall on the back of the structure. Marble sized hail was reported in Odenton. Heavy downpours flooded 20 basements and numerous roads were covered by water. Rainfall of up to 5.23 inches was recorded. In Harford County, two homes were damaged by fires resulting from lighting strikes.

19th: Thunderstorms with hail and high winds moved through the District of Columbia and the northern and central suburbs during the afternoon of the 19th. Winds gusted as high as 70 MPH. At least 82 trees were downed across downtown Washington. Trees fell onto power lines, cars, homes, and several roads. A large tree fell onto a vehicle in Northeast. A 51-year-old man was killed and three other passengers sustained minor injuries. In Prince George's County, pea to quarter sized hail and 60 MPH winds were spotted. In Prince William County, two large trees were downed in the southeast portion of the county. In Fairfax County, dime sized hail fell. In Arlington County, flooding was reported on Interstate 66.

22nd: Heavy rainfall over the headwater region of the South Branch of the Potomac River caused the waterway to rise above flood stage in Grant and Hardy Counties in the eastern panhandle of West Virginia. In Petersburg, where flood stage is 10 feet, the river crested at 10.8 feet. In Springfield, where flood stage is 15 feet, the river crested at 17.49 feet.

28th: Thunderstorms with winds gusting in excess of 58 MPH moved through the Eastern Panhandle of West Virginia between 5 and 7 PM. In Grant County, a power pole was downed and hail was reported. In Morgan County, trees were downed, including one which fell onto a power line in a mobile home park. In Berkeley County, a tree was downed and a utility pole was lifted partially out of the ground. In Jefferson County, numerous trees were downed and the roof of a large hay barn was blown off.

Special Report on the April 28th Tornadoes

Devastating tornadoes, large hail, and damaging winds were produced by a long-lived supercell thunderstorm that tracked across Central Virginia, South Central Maryland, and across the Chesapeake Bay to the Eastern Shore of Maryland between 4:30 and 8:30 PM EDT. See pictures of the damage, maps of tornado tracks, and more on our web page at: http://weather.noaa.gov/lwx/Historic_Events/apr28-2002/laplata.htm

In Virginia: This storm damaged property all the way from Rockingham County to the Potomac River. It produced an F2 tornado in Shenandoah County, a funnel cloud in Fauquier County, large hail, heavy downpours, and scattered wind damage along its path.

In Shenandoah County, an F2 tornado touched down just east of Quicksburg and stayed on the ground for 4 miles before it dissipated while moving up the west side of Massanutten Mountain. The twister was about 75 yards wide and it caused a total of $1.6 million in damage. Along the path of the tornado, 15 residential structures were damaged or destroyed, and 15 had minor damage. Four poultry houses and 15 barns were destroyed. The roof of a poultry house was ripped off and thrown onto Interstate 81. Airborne roof debris hit a tractor-trailer on I-81 and caused it to flip onto its side. The driver of the tractor-trailer was treated for minor injuries.

Across Charles County, 638 homes were damaged, 100 homes were destroyed, 143 businesses (mainly in downtown La Plata) were damaged, and 49 businesses were destroyed.

The twister moved across Interstate 81 into the Kay Hill subdivision. Homes were damaged and trees were downed. In Franwood Farms, a two-story home was severely damaged by debris from a neighbor's 60-foot-high grain silo. A woman inside the structure was treated for bruises. At Franwood Farms Airport, 5 people took shelter in a hangar. The tornado blew the roof off the building and flipped a plane on the landing strip. The tornado's path was visible through the woods up to two miles east of Framwood Farms and ended near Massanutten Mountain.

The storm moved into Rockingham County, where it produced dime sized hail. In Page County, golf ball sized hail fell and power lines were downed. In Culpeper County, a tree was downed. In Fauquier County, a funnel cloud was photographed on a hill near Fauquier Springs. A large tree and utility poles were downed and dime sized hail was reported. In Prince William County, quarter to golf ball sized hail caused property damage.

In Maryland: The supercell crossed the Potomac River from Prince William County into Charles County and dropped a tornado just 2 miles east of the river. The devastating tornado left a 32 mile path of destruction all the

Regional Weather Review (Continued from Pg. 3)

way to the Chesapeake Bay ranging from F1 to F4 damage. It killed 5 people, injured over 122, and caused over $115 million in damage. Up to 10 miles north of the path of the tornado, large hail up to 4.5 inches in diameter fell. Debris from La Plata was found as far away as southern Delaware. Wind damage was also reported near the path of the storm.

Across Charles County, 638 homes were damaged, 100 homes were destroyed, 143 businesses (mainly in downtown La Plata) were damaged, and 49 businesses were destroyed. Countless trees and agricultural buildings were downed. Three people were killed and at least 120 people were injured across the county, 12 critically. A 51-year-old man was killed and his wife was seriously injured when their house under construction on Hawkins Gate Road, about 5 miles east of La Plata, collapsed. A 54-year-old man died in his car from an apparent heart attack at the intersection of Route 301 and Route 6 in downtown La Plata. The third victim, a 72-year-old woman, died of a heart attack in Waldorf after being frightened by the tornado.

The tornado first touched down between Rison and Marbury. It passed just south of Pisgah where it grew to F2 strength. The tornado moved through Mount Pisgah and damaged homes between Ripley and Garden Estates. The twister passed just north of the community of Graystone. Next, it moved through the communities of Habre de Venture, Longmeade, Clamber Hill, Hawthorne Manor, and Hillendale. The tornado, now F3 strength, hit the western portion of La Plata, moving directly through the neighborhoods of Valley View, Morgan's Ridge, Quailwood, and Haldane. The tornado, now F4 strength, continued east into the downtown area near the intersection of Route 301 and 6. The downtown business district was devastated after 65% of the buildings were destroyed. The tornado moved into the northern portion of Clarks Run, across Route 6, and into the community of Ellenwood. The tornado moved east of La Plata into the southern portion of Brynwood Farm Estates. Several homes were completely destroyed, and this was the location of one of the fatalities and numerous injuries. Next, the tornado intersected Route 5 just south of Hugesville. It severely damaged the Girl Scout facility off Scout Camp Road. The tornado tracked toward Benedict, remaining just south of Route 231 and weakening to F2 strength. It struck a home south of Benedict before crossing the river into Calvert County just south of the bridge

In Calvert County, the tornado first struck the community of Patuxent View just south of Route 231 at F2 strength. Over half of the homes in this development were damaged. One home with no foundation or anchoring was picked up and thrown 80 feet into a culvert. A 68-year-old man and his 65-year-old wife who were taking shelter in the house were killed. The twister damaged several homes and barns at the intersection of Adelina Road. It pushed east through the communities of Boyds Farm, Mutual Estates, and Chippingwood, where it damaged more property. It crossed Route 2/4 and 765 just north of Saint Leonard, downing trees as it went. Finally, it crossed the Western Shores Estates development at F1 strength before it moved offshore. Across Calvert County, 125 houses were damaged and 10 were destroyed. As the first tornado was weakening, another tornado was forming a few miles south along the Long Beach shoreline. This tornado grew in strength as it crossed the bay. It made landfall in Dorchester County on the Eastern Shore just south of Taylor's Island. The tornado damage path from start to finish stretched over 64 miles from Western Charles County to the Delaware line.

FLOYD'S THE MAN OF HOLLYWOOD

By Melody Paschetag, Service Hydrologist

Floyd Abell's interest in the weather began October 15, 1954 with the passage of Hurricane Hazel. Hazel moved North across Virginia producing strong winds and heavy rainfall. As Floyd put it, "nice one day and nasty the next."

Floyd has been very active with the weather. He began taking daily weather observations in 1980 with Bob Ryan's observation network and continues today. In 1992, Floyd became a part of the Weather Service's SKYWARN program. He has attended several spotter training classes and has relayed significant storm data to the National Weather Service.
Over the years, Floyd has participated in several storm surveys in Southern Maryland. His assessments have helped the Weather Service in determining the type of severe weather that occurred in the area, from microbursts and tornadoes to flooding.

Floyd's most memorable weather event was February 10, 1994. A major ice storm occurred across the region with the worst part in a narrow band extending from Fredericksburg, VA across southern Maryland to the Eastern Shore. Heavy ice brought down trees, phone and power lines with many people without power for a week.

Floyd has truly become the "weatherman" of Hollywood; Hollywood Maryland that is.

Summer/Fall SKYWARN Training Classes

Here's your chance to join the National Weather Service SKYWARN Spotter Network or enhance your severe weather spotting skills. How can you sign up for these free classes? Visit our SKYWARN training web site for details: http://weather.noaa.gov/lwx/skywarn/classes.html

BASICS I 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 prerequisite for all other classes.

Saturday, September 7th, 12:00 - 3:00PM at the FAR_CARA Amateur Radio Fall Fest, Howard County Fairgrounds, West Friendship, MD

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. You must have taken Basics 1 to attend this class. This class is held at the National Weather Service office near Dulles Airport.

Thursday, July 18th 7:00_9:00PM

Saturday, August 3rd, 1:00_3:00PM

The Baltimore/Washington Forecast Office bids farewell to one of the NWS's finest…

By Julie Arthur, Lead Forecaster

The Baltimore/Washington Forecast Office bids farewell to one of the NWS's finest...

Longtime weather forecaster, James Wiesmueller (Jim), recently left the National Weather Service to pursue other lifelong interests. Jim, who has been fascinated with weather since elementary school, began his career began back in the mid 1970's when he held a temporary position with NOAA's Center for Experiment Design and Data Analysis in N.W. Washington. He then headed west to become an intern at the forecast office in Fairbanks, Alaska. In 1980, he was promoted to the Denver, Colorado forecast office as a journeyman forecaster. His strong work ethic and passion for the weather was rewarded by a promotion to a lead forecaster position. Jim returned to the eastern U.S. in 1990 to be a lead forecaster at the high profile Baltimore/Washington Forecast Office (LWX)

During his tenure at LWX, Jim worked during many challenging weather situations including the Madison County Flash Flood, which was comparable meteorologically to the Big Thompson and Johnstown floods. He was also forecasting when the remnants of Hurricane Fran brought heavy rains and flooding to the area. Jim remarked that he never ceases to be amazed by the amount of rain generated by tropical systems. Jim was also present during the tornado that swept through College Park. This tornado was one of the longest-lived tornadoes that Jim has ever seen.

Because Jim's career spanned the country, he had the opportunity to witness other dramatic displays of weather. He remembers experiencing -52F, darkness and dense ice fog in Fairbanks, the Blizzard of '82 in Denver that brought the city to a standstill, and the time he was issuing tornado warnings in Denver and could see one tornado out the front window and another out the back window!

In terms of how technology has changed in the field of meteorology, Jim says it's "Like going from the stone age to the space age. We started with WWII teletype machines and radar, paper facsimile, and a crude 3 layer numerical model. We had very little diagnostic capability beyond a sounding and hand surface and upper air analyses. There was the early polar orbiter satellite and GOES but at infrequent intervals and from a very trouble-prone photo developer with no grids. All-in-all, it was what I call "seat-of-the-pants" meteorology."

Forecast Office bids farewell...

Jim credits satellite, Doppler Radar, super-computers, improved numerical models and a better understanding of the processes governing atmospheric behavior for making the biggest differences in forecasting.

As for the future, Jim plans to pursue his mountain climbing and photography hobbies, and to perform volunteer work. He invites everyone to see his photo exhibit at Eastern Loudoun Regional Library, Cascades, from September 1st through October 31st.

The staff at LWX will miss Jim's expertise and friendship. We wish Jim the best of luck in his next endeavors!

Aviation Weather

by Andrew Woodcock, Forecaster

The National Weather Service is best known for the forecasts it makes for public use, such as "partly cloudy, high around 80, light south winds," and warnings issued during severe weather events. An area of equal importance requiring as much preparation time and effort, but rarely in the limelight is the aviation forecast program. At NWS Sterling the office issues Terminal Aerodrome Forecasts (TAFs) for six airports - Dulles, Reagan National, Baltimore-Washington, Martinsburg, Charlottesville, and Martin State Airport northeast of Baltimore.

A TAF is a twenty four hour forecast consisting of wind direction and speed, visibility, cloud height and quantity, and weather restrictions to visibility. If a strong area of Autumn high pressure is anchored over the eastern US and will remain stationary, a "one line TAF" may be all that is required, stating that during the length of the forecast there will only be scattered clouds, visibility will be unrestricted, with light west winds. On the other hand, there are days when the weather will be so complex that the aviation forecaster will be pulling their hair out by the end of an eight hour shift.

All elements in a TAF can cause a forecaster heartburn - what to do when a warm front remains stationary longer than expected in April? North of the front the visibility may only be one-half mile in fog. Perhaps the forecaster had forecasted visibility to improve from one half mile to three miles at 10 am, and then go up to "seven plus" (unrestricted) by noon. An amended TAF would have to be issued. In doing so, the forecaster would look at computer model guidance, and visible satellite photos to get a handle on much the area of fog been dissipating.

Likewise, clouds are another key consideration. Skies can be classified as "clear," "scattered" (1/8 to 4/8 of sky coverage), "broken" (5/8 to 7/8), and "overcast" (8/8). A "ceiling" is defined as anytime more than half the sky is covered in clouds. This may be cumulative due to two or more layers, i.e. - if 3/8 of the sky have cumulus clouds measured at 4500 feet, and there are an additional 3/8 cloud cover at 10,000, then the ceiling will be 10,000 feet. In some cases part, or all, of the sky will be obscured at the surface. Fog is the most likely culprit for this. A cloud layer above a partial sky obscuration may constitute a ceiling.

Winds are a prime consideration to aircraft tower personnel, as the direction we are forecasting the winds to be from determine which runway aircraft will use for take-off/landing. Planes take off into the wind for lift. In making a wind forecast the forecaster will look at the current weather situation including surface observations, and noting what weather features are approaching the area. If an approaching cold front will be especially strong, the forecaster will include wind gust remarks in the TAF. Local effects can also play into the wind forecast - Reagan National is located along the Potomac River. In the Spring, when the water is cold, winds across the area may be southwest at 8 knots (winds are forecasted in knots, 1 knot equals 1.2 mph), but at National the winds will be "channeled" by the river - measuring southeast at 9 knots.

At NWS Sterling the office issues Terminal Aerodrome Forecasts (TAFs) for six airports

Significant weather is the other main consideration. Thunderstorms, rain, fog, snow, freezing rain are all important to the pilot. Whether or not the pilot flies depends on the type of aircraft, it's degree of instrumentation, and the experience of the pilot. Deicing equipment will allow a plane to become airborne during winter weather, and instruments can allow a pilot to "see" in very low visibility, but no pilot should ever attempt to takeoff/land in a thunderstorm. Even the largest plane is no match for extreme thunderstorm winds. Forecaster are NWS Sterling are in frequent contact with airport tower personnel when thunderstorms threaten.

Much more information on aviation weather is available on the Sterling NWS web page.

Spring 2002 Review

By Dewey Walston, Lead Forecaster

Meteorological spring is defined as the months of March, April and May.

March was a warm month with temperatures averaging above normal. Record high temperatures were broken in April making it the 8th warmest April on record in Washington and the 17th warmest on record in Baltimore. After an exceedingly warm April, May featured a week long cold snap. For the period from the 18th to the 23rd, high temperatures were mainly in the lower 60s. The temperatures for the month of May averaged below normal. For the three month period, temperatures across the area averaged above normal.

Near normal precipitation occurred across the area in March. Precipitation averaged normal to above normal in April. In May, precipitation was "hit or miss" due to scattered thunderstorm activity with some areas receiving above normal rainfall while other areas had below normal rainfall. For the 3 month period, precipitation varied from above normal to below normal.

Rainfall during the spring improved soil moisture and aided farmers. In addition, the rainfall has kept the drought from getting worse. However, to end the drought, we will need several months of above normal rainfall.

Washington National Airport Spring 2002
Average Temperature 56.6 degrees
Normal Temperature 56.1 degrees
Departure from normal +0.5 degrees
Precipitation 9.01 inches
Normal 10.19 inches
Departure from normal minus 1.18 inches

Washington Dulles Airport Spring 2002
Average Temperature 54.7 degrees
Normal Temperature 52.9 degrees
Departure from normal +1.8 degrees
Precipitation 11.68 inches
Normal 10.99 inches
Departure from normal plus 0.69 inches

Baltimore MD Spring 2002
Average Temperature 54.6 degrees
Normal Temperature 53.3 degrees
Departure from normal plus 1.3 degrees
Precipitation 10.82 inches
Normal Precipitation 10.82 inches
Departure from normal 0.00"

Sterling Website...an Introduction

By Jim DeCarufel, Webmaster

As many of you have already seen, the NWS Sterling web pages (http://weather.noaa.gov/lwx) have changed dramatically during the past few months. The reason for all the changes is that the National Weather Service has incorporated a new "web image" for all of its web sites across the country. These changes provide a consistent "look and feel" to all web sites and include accessibility features for the handicapped. Additionally, many new features have been added and more are planned in the coming months. Here is a brief rundown on some of the changes.

Local forecast by "City, St" is a new feature where you can type in any city across the country (zip code works too) and get the current forecast for that area. If you'd rather select an area from a map, start at http://www.srh.noaa.gov where you'll get a map of the United States with each office's area of responsibility color-coded. Links are also provided for the River Forecast Centers and the Central Weather Service Units as well.

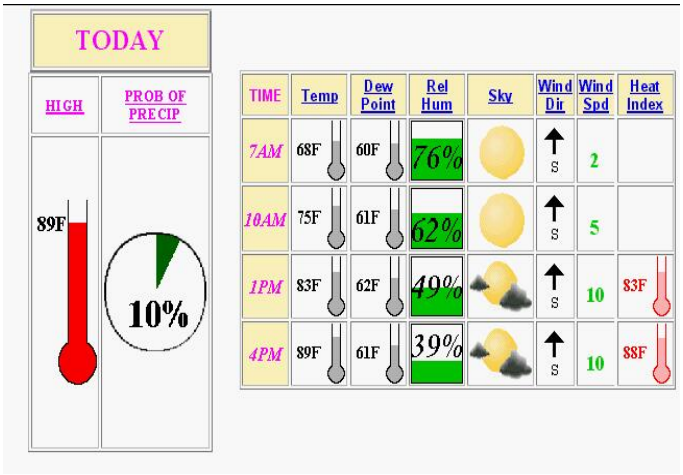
Quick glimpse at the weather has a map of all the counties in the Sterling County Warning Area. These maps are dynamic, in that they are updated every 6 to 8 minutes, providing the servers are working properly. If a county is shown in any color beside white, that means there is a statement, watch or warning in effect for that county. Clicking on any county will bring up a graphic AND text forecasts for that county for the next seven days, and any statements, watches or warnings in effect will be shown as a link as well.

Sterling Website..an Introduction continued

Much more information is also included on the right side of the page. Under the **Current Conditions** banner is the latest weather conditions at the location closest to that county. **More Local Wx** link has more observations from around the area and clicking on any one of those will show all the observations for the past 24-48 hours for that location. Under the **Radar and Satellite** banner are links to the current radar and satellite imagery, loops are also available on those pages.

Additional Forecasts & Information section has links to the forecast discussion, Graphical Forecast Table and more. Those of you who are one of our cooperative weather sites and enter your daily data using the ROSA phone or call the information in to us can see your data on the Precip/Temp Summary link. We really do use everything you send us. Any other links under this section are geared toward the county you clicked on. Counties along the Bay will have the marine forecast link while those in the mountains will have a link to the Mountains/ Skyline Drive forecast.

Another product, not so new, is our **Graphical Forecast Table**, example shown above right. Since a picture is worth a thousand words, I won't explain everything on it but many favorable comments have made this product one of the mainstays of our web site.
We hope you found this brief introduction to our web site useful and informative. Since there is just way too much information to cover in this issue, other topics will be covered in future issues. If you have a specific question about the web content, you can e-mail me.



NEARLY 50 YEARS OF SERVICE—Robert Dornin

October 1996, Robert T. Dornin received the Thomas Jefferson Award, the highest award from the National Weather Service. Awarded "for unusual and outstanding accomplishment in the field of meteorological observations in the tradition of Thomas Jefferson, pioneer weather observer and third president of the United States." This award is only awarded to five observers each year across the Nation.

It all started in 1934 at Bayville Farms in Princess Anne county Virginia (currently Virginia Beach). Edward C. Turner was a volunteer weather observer recording daily and significant rainfall then relaying it to the Norfolk Weather Bureau. In 1944, Mr. Turner moved to Marshall in Fauquier County Virginia. He continued recording precipitation and began working with the Washington DC Weather Service office. After 20 years of being a volunteer weather observer in the National Weather Service's Cooperative Observer Program, Mr. Turner passed his station onto his son-in-law, Robert T. Dornin. The station was moved to Mr. Dornin's home in The Plains, Virginia March 31, 1954. He and the station have moved a few times, but still reside in The Plains. Mr. Dornin is known as the "Weatherman" in The Plains and has been called to verify climate information for attorney's and respond to the local media on weather conditions.

Once the Remote Observation System Automation (ROSA) was implemented, he became the first station in the Sterling Network to switch over to the new system. He has also became a part of the Severe Storm Spotter Network, SKYWARN, relaying critical severe weather reports directly to the office on a real-time basis.
Mr. Dornin graduated with a degree in Chemistry from the University of Virginia in 1939. He then worked in Baltimore, Maryland at Bethlehem Steel. In the early 50's he worked on a farm then became a teacher. Mr. Dornin taught math and history at The Hill School in Middleburg, Virginia from 1960 to 1985. In 1994, the school named its science center for Dornin. Mr. Dornin has been a weather observer for nearly 50 years. He couldn't have done it without the help of his wife, Heloise. Their observations, along with other cooperative observers, have helped refine forecasts, assists farmers, develop local climatology, support insurance claims, and settle lawsuits.

Thank you Bob & Heloise!

LWX Historic Chronicle - Tales of Past Weather Events

Tropical Storm Agnes—June 21-23, 1972

Research by Barbara Watson, Warning Coordination Meteorologist

Tropical Storm Agnes was like many early June tropical cyclones. It developed in the Gulf of Mexico and became a weak Category 1 hurricane before it made landfall on the Florida Panhandle. It weakened to a depression as moved inland across Georgia and the Carolinas. It emerged off the Virginia Capes and strengthened back to a tropical storm as it headed north to make landfall once again on New York's Long Island. None of this sounds very noteworthy especially when compared against large and powerful storms such as Hurricane Floyd. However, Agnes is a reminder that we can not assume that the size and category of hurricane tells the whole picture. Total storm damage in the United States from Agnes was estimated at just under $3.5 billion and 122 people were killed by the storm. Agnes produced tornadoes in Florida and flooding along the East Coast. Even with the storm center passing well off the Delmarva Coast, Agnes managed to drop torrential rain over the region averaging close to 8 to 10 inches with locally higher amounts. A total 16.65 inches was recorded at Washington-Dulles Airport just west of Washington, DC. Widespread flooding resulted.

In Virginia, there were 13 deaths and $222 million in damages... 21 people lost their lives in Maryland.

Most northern Virginia streams and creeks overflowed their banks during the night, washing out roads and destroying homes. Uninsured homes and a lifetime accumulation of household goods were quickly swept away. Fairfax County reported an estimated $25 million damage, by far the largest in the state. Manassas was badly flooded as was the Occoquan River which washed out a section of the Route 1 bridge. The Shenandoah and the Potomac Rivers flooded as well. In Virginia, there were 13 deaths and $222 million in damages. Numerous homes were destroyed, 600 roads went underwater and 103 state highway bridges were washed out or damaged.

In Maryland and the District of Columbia, heavy rains on the 21st and 22nd resulted in severe flooding. Total storm damage was estimated at $110 million and 21 people lost their lives in Maryland. The heaviest rains occurred in the north central part of Maryland where totals set all-time records. Highest total was 14.68 inches at Westminister and 13.85 inches fell at Woodstock. Totals of 8 inches or more fell in an area west of the Chesapeake Bay and east of Hagerstown. The District of Columbia reported more than 7 inches.

The Potomac River was above flood stage between the 22nd and the 24th. At Little Falls, just outside Washington DC where the flood stage is 10 feet, the river crested at 22.03 feet. At Wisconsin Avenue in downtown Washington, a 15.45-foot crest persisted for about 8 hours. Along the Monocacy River, a crest of 35.90 feet occurred at Frederick, Maryland. The previous record was 30.0 feet set back in 1889. Flooding also occurred along the Anacostia River and along Seneca and Rock Creeks. Flooding along the Patapsco River broke all existing records and resulted in the worst flooding that the Baltimore area had ever seen. Near the Pennsylvania border

Route 144 bridge over the Patapsco River at Ellicott City as it appeared shortly after the flood caused by the storm "Agnes" in late June. State and County road systems took major damage.

the Susquehanna River threatened the Conowingo Dam. A wide swath of land, including the towns of Port Deposit and Havre de Grace, was flooded along the river from the dam to the Chesapeake Bay, a distance of 12 miles.

National Weather Service
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Sterling, VA 20166

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Thanks for all of the positive feedback on the inaugural edition of the newsletter. We hope you enjoy this edition. Let us know if you have any comments or suggestions!

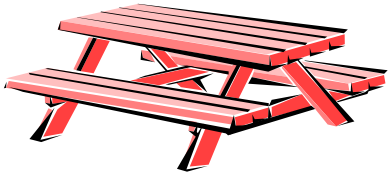
SKYWARN and CO-OP Observers Come and bring your family...

for food and fun with other skywarn spotters and cooperative observers at the Baltimore-Washington Forecast Office in Sterling VA..

When : Saturday, August 10th
Time: Noon - 4PM at the NWS Sterling Office

We will provide the meat, buns, condiments, drinks and paper products. Please bring a side dish to share (things that don't perish easily), chairs, blanket, etc. There will be live music, a special balloon release, tours of the facility, an emergency services vehicle, awards ceremony and more.

Register with Brian at jmpnjck@comcast.net (number of people expected to attend in your group and your ID #)



SKYWARN Advisory Committee

The SKYWARN Advisory Committee meeting will also be at the Sterling Forecast Office on August 10th from 9AM to 11AM.
Just Before the picnic!

Tell Us Your Story!

Have you experienced a weather event in our local area?
Would you like to tell your story?

In future newsletters, we plan to print first hand accounts of local weather events written by our readers! We're looking for essays describing the most memorable local weather event you've experienced. The essay should be no more than 200 words in length. It can be sent to us via e-mail attachment (WordPerfect or Microsoft Word format) to the following address: Michelle.Margraf@noaa.gov. We will also accept essays sent via mail using the address above (attention: Michelle Margraf). All we need to know is your name, your age (only if younger than 18), and the town you live in. Young weather spotters are encouraged to participate. Keep an eye out to see if your story is chosen to be published in a future newsletter!