

# Sterling Reporter

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

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## The End of an Era in Fauquier County

By Melody Paschetag, Service Hydrologist

M. Meade Palmer of Warrenton and Robert T. Dornin Sr. of The Plains were great men in both their professional and personal lives. Together they were the weather team of Fauquier County, Virginia. As National Weather Service Cooperative Observers, they provided daily observations for over a century.

Meade Palmer started recording daily weather information for the National Weather Service (the Weather Bureau at that time) February 1, 1951 and continued until his death July 16, 2001. At 85 years of age, Mr. Palmer had 55.5 years of service. Robert Dornin was passed responsibility from his father-in-law, Mr. Turner, March 31, 1954. Mr. Dornin continued service until his death October 19, 2002. At 88, Mr. Dornin had 48.5 years of service. Combined, the two men had 104 years of service of observing and recording weather conditions in the county.

October 1996, Mr. Dornin received the Thomas Jefferson Award, the highest award from the National Weather Service. The award is 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 is only awarded to five observers each year across the Nation.

As Cooperative Weather Observers, they were responsible

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## NWS Sterling Receives Dept. of Commerce Bronze Medal Award

The National Weather Service Forecast Office in Sterling, Virginia was recognized for "timely and accurate forecasts and warnings for the September 24, 2001 tornado [in Prince George's and Howard counties, Maryland] that allowed officials and citizens to take actions that saved lives". The award was presented at the annual NOAA Honor Awards ceremony on October 22, 2002 at the University of Maryland in College Park.



*Damage at Laurel High School in Laurel, Maryland  
Copyright 2001, The Baltimore Sun, Photo by Kenneth Lam*

A large multi-vortex tornado with winds as high as 200 MPH moved through a highly populated area in the Washington D.C. suburbs between 5 and 6 PM EDT. It touched down near Hyattsville in Prince George's County, tracked along the Route 1 corridor from College Park to Laurel, then crossed into Howard County. The tornado remained on the ground from North Laurel until it dissipated in Howard County about 1 mile east of Columbia. The tornado crossed several major roadways at the height of rush hour, including the Capitol Beltway and Route 1. In addition, the tornado damaged a high school, a research facility, a major shopping center, and buildings at The University of Maryland. The tornado killed 2 students traveling in an automobile on the University of Maryland campus, injured 55 others, and caused 100 million dollars damage.

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for recording the daily temperature extremes (maximum and minimum), weather conditions at the time of observation (temperature and sky conditions) and measuring 24-hour precipitation (rain and snow). This was done everyday at the same time. If they were away, they were responsible for making sure the observations were done in their absence. Their weather observations along with other cooperative observers across the country have helped refine forecasts, assist farmers, develop local climatology, and support insurance claims, and settle lawsuits.

Mr. Palmer was a nationally-known landscape architect. Following graduation from Cornell University in 1939, Mr. Palmer returned to Arlington, where he was born and raised, to work in the Arlington County Planning Department. He then moved to Richmond to intern with Charles Gillette. Mr. Palmer was called to service in WWII and served as a naval intelligence officer in the South Pacific. He retired from the U.S. Naval Reserve as Lieutenant Commander in 1963. He met and married his wife, Isabel, in Hawaii. They return to Virginia in 1948 to settle in Warrenton, where Mr. Palmer opened a private practice. Some notable projects included: Lyndon Baines Johnson Memorial Grove, Washington, D.C.; State Office Building and Governors House, Annapolis, MD; Tomb of the Unknowns at Arlington Cemetery, Arlington, VA and many more.

Mr. Palmer joined the faculty of the Department of Landscape Architecture at the University of Virginia in 1961. He taught courses in plant identification and planting design until 1986, when he was forced into mandatory retirement upon reaching the age of 70. A great outcry from both students and colleagues led state officials to overturn the offending regulation and Mr. Palmer returned to the classroom the following year. Mr. Palmer was regarded as a pioneer and a giant in landscape architecture. In more than 60 years of practicing landscape architecture, Mr. Palmer received many state and national awards, including the 1991 American Society of Landscape Architect Medal, the highest award given by the organization.

Mr. Dornin graduated with a degree in Chemistry from the University of Virginia in 1939. He then returned to his hometown of Baltimore, Maryland to work at Bethlehem Steel. In the 1950's, Mr. Dornin worked at Mount Joy Farm near Marshall, Virginia, then Avenel Farm near The Plains. While at Mount Joy Farm, Mr. Dornin married Marianna Hamilton Nancy Turner. From 1960 to 1980, Mr. Dornin taught math and history at The Hill School in Middleburg, VA. Following retirement, he worked part-time for five more years. In 1994, the school named its science center for Dornin. After Mrs. Nancy Dornin passed away in 1983, Mr. Dornin married Heloise D.H. Herbert in 1985.

Beginning in the early 1970's, Mr. Dornin wrote regular weather columns for *The Fauquier-Times Democrat* newspaper. In the 1990's, he wrote a monthly column for *Fauquier Magazine*. Mr. Dornin was known as the AWeatherman in The Plains and was called to verify

climate information for attorneys 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 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.

With the passing of these great men, the dedicated service of providing quality weather data for Fauquier County ended. Nearly a year after Mr. Palmers death, weather observations resumed in Warrenton. His daughter, Sarah M. Palmer is following in her Fathers footsteps. With the more recent passing of Mr. Dornin, logistics of observation responsibility are being determined. In the short-term, Heloise Dornin, Mr. Dornin's wife, has been taking the observations. Mr. Palmer and Mr. Dornin have both passed on the enthusiasm of the weather and dedication of service to family and friends. With the passing of both these men, it is the end of an era. Through their lives and work, they have enriched the lives of us all. They will truly be missed.

## ARRL/Skywarn Recognition Day

by Butch Baker, Skywarn Coordinator



*Skywarn volunteers at work (Photo by Chad Rudolph)*

Skywarn Recognition Day (SRD) is a special event co-sponsored by the American Radio Relay League (ARRL) and the National Weather Service (NWS) to recognize the contributions that amateur radio operators make to NWS during critical weather. On SRD, amateur radio operators spend a 24 hour period (this year from Dec. 6th at 7:00PM to Dec 7th at 7:00PM) at their local NWS office making contacts and exchanging weather observations with other operators from around the world. This was the fourth year of operation for SRD, which is headed by Scott Mentzer, Meteorologist-in-Charge for the NWS office in Goodland, Kansas. Scott has done a fantastic job and this special event has been a success right from the start.

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Now for our part in planning for our local event. None of this would have been possible without the support of Barbara Watson, Warning Coordinator Meteorologist for the Sterling NWS. Her support to the Skywarn program is outstanding and she has been behind us all the way. Also thanks to Mike Virgilio, who is Assistant Coordinator.

Numerous other offers of help and equipment came pouring in for the event. Chip offered his "rocket launcher" portable mast system. He is a member of Woodbridge Wireless and was responsible for their donation of a triband HF antenna and rotor. Brian requested a pushup mast and another triband antenna from the Ole' Virginia Hams which they gladly lent us. Ken came through with his PSK rig. ED let us have his FT\_900 HF rig. Mike got with Art Feller of the Network Engineers Repeater Association. (NERA) and made their IRLP node available to us.



*Equipment setup in the snow (photo by Leila)*

Things couldn't have come together any better, but Mother Nature had a hand to play. On December 4th the region got 6 to 8 inches of snow! This complicated things a bit, but our team came through. Chip, Mike, Brian, Chip's mom and dad, Richard, and Mark assembled Friday morning to erect the antenna system on snow pack. What dedication! At last the hour arrived. Several people were unable to attend because of the snow but we still had over sixteen hams plus NWS staff to man the rigs.

Our final totals were: 73 NWS offices contacted, 583 total QSOs (contacts) and 10 out of 14 endorsements earned. We were not at the top, but we were running with the big boys. I was very proud of our team and what they achieved. I want to thank all those above mentioned, and those who were not that worked so hard on this event. I have no doubt that 2003 SRD will be even more stellar.

## Upcoming Skywarn Classes

Here's your chance to join the National Weather Service SKYWARN Spotter Network or enhance your severe weather spotting skills. How do I sign up for these free classes? Visit our SKYWARN training web site for details:  
<http://www.erh.noaa.gov/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.**

Monday, **February 10th**, 2003, 6:30-9:30PM, Orange Co. VA

Saturday, **September 6th**, 2003 at the Howard County Fairgrounds.  
Class details will be posted this summer.

## So what happens to your reports after you send them to the NWS?

by Michelle Margraf, Storm Data Focal Point

After you hang up the phone or send an e-mail to us, ever wonder what happens to your severe weather report? First of all, we are very glad to hear from you. You are our eyes and ears in the outside world during times of inclement weather. Your reports give us "ground truth" information for what we see on radar or are expecting to occur from computer model predictions.

Our radar shows the location and movement of thunderstorms, their intensity, motion and speed of winds inside the storm, and runs several algorithms to determine amount of rainfall, depth and strength of wind rotation, hail size, etc. From these tools we make a general determination of the severity of a storm and what impact it may have on a community.

Spotter reports verify what is being indicated on radar and help us provide more detailed information to our customers, including the emergency management community, local law enforcement, rescue squads, the media, and the public. We issue frequent statements and include all current weather reports we have received to keep officials informed. After the storm has passed we use spotter reports to make better predictions on the strength and capability of a storm as it moves into new area. Reports are essential to verify if rotation or severe winds indicated on radar are reaching the ground, to verify hail size and rainfall predictions, and to give us information we cannot get from radar such as damage, injuries, and effects on the community.

A few days after a storm the paperwork begins. We put an event folder together including all statements issued and reports received for each individual event for future reference. During

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the next few months we look through all of the data that was collected for each storm and calculate how well our storm warnings and advisories verified county by county. We also write a storm summary for each significant weather event for the government publication, Storm Data and Unusual Weather Phenomenon. A draft of this submission is posted on our web site under 'Storm Reports'. Here's an example of the publication and how spotter reports add depth and content to our summary of an event.

*Excerpt from Storm Data and Unusual Weather Phenomenon, April 23, 1999:*

*Winds over 55 MPH also downed trees and power lines in Frederick and Clarke County between 3:30 PM EDT and 4:15 PM EDT. Frederick County spotters reported between 1 3/4 to 3 1/2 inch diameter hail. The rubber membrane roof of the War Memorial Building in Winchester was punctured by hail the size of golf balls, allowing heavy rain to fall inside the structure and cause significant water damage. Numerous cars were damaged by hail, averaging \$1300 in repairs. Winchester city police reported damage to 15 cruisers, and automobile dealers on Valley Avenue reported damage to over 150 cars. Hundreds of other privately owned vehicles received dents and broken windshields. Property owners also reported damage to roofs, siding, windows, and landscaping from the 10 minute deluge. Northwest of Winchester, strong winds left behind a narrow path of uprooted or snapped trees and minor trim damage to a home. Clarke County was the next location in the path of the storm. Hail of up to 1 3/4 inch in diameter tore leaves from trees, damaged siding and shingles on homes, and dented automobiles. Strong winds also snapped or uprooted trees between Beacon and the Shenandoah River. Next, Southern Loudoun County bore the brunt of the storm. Golfball to baseball sized hail broke store windows and damaged several vehicles in Middleburg. One resident reported the hail fell with such force it broke through fiberglass panels on a shed. Prince William County suffered damage from hail between 1 and 1 3/4 inch in diameter, resulting in damage to cars, roofs, and siding. Much of Western and Southern Fairfax County also received significant damage. Hail up to 2 3/4 inch in diameter was reported around Lorton. Hundreds of cars were dented, several windows and skylights were broken, trees and bushes were stripped of their leaves, siding and shutters were damaged, and roof shingles were chipped. Also, a funnel cloud was reported in Clifton near Highway 28 at 4:47 PM EDT. Damage across Northern Virginia from this storm system was expected to total around \$50 million.*

*Travers continued from left side of page*

media. Expectations are very high and so is the stress. A key part of Jim's job has been to try and manage these expectations. Perfection is a goal, however not yet a reality. The most satisfying aspect of his career has been the people he's met and worked with both inside and outside the government. Despite the tremendous advances in technology and science, it's the people that make it work.

## Jim Travers, Meteorologist-in-Charge

by Jim Travers and Michelle Margraf

It's a sure bet that you've heard the name Jim Travers if you've worked with the National Weather Service Forecast Office in Sterling, Virginia. Jim has been the Meteorologist-in-Charge (MIC) of the Baltimore/ Washington DC forecast office since 1995. He's been responsible for guiding the office through a very busy time when active modernization has resulted in significant changes in equipment, software, and staff roles.

In fact, Jim has played several different roles during his career with the National Oceanic and Atmospheric Administration (NOAA). After graduating with his Master's Degree in Meteorology from New York University, he started his career with what is now called the NOAA Corps. Since then he has worked at three regional forecast offices, National Weather Service Headquarters, National Weather Service Eastern Region Headquarters, and the National Centers for Environmental Prediction.

After nearly 38 years with NOAA and its predecessor, Jim has a lot of memories. Some of the most memorable experiences have been planning weather support for Operation Sail on July 4<sup>th</sup>, 1976 and the 1980 Winter Olympics in Lake Placid, New York. He also remembers vividly working as a forecaster during the Washington area President's Day Storm in 1983. Outside of work, Jim keeps busy traveling and working with community organizations. In his younger days, Jim was a skier and snow lover. As he's matured, sun and sand have become more to his liking.



While Jim has been MIC at the Baltimore/Washington D.C. Forecast Office, the office has been awarded two Gold Medals, four Bronze medals and two Governor's awards (from Maryland and Virginia), as well as numerous other smaller forms of recognition.

The challenge of working in the Nation's capital is unique in many ways. Where else do you get to provide the weather support for the presidential inauguration? Daily briefings of high level government officials are routine and of course there's always the discussions with the local and national

*Travers continued on bottom right side of page*

## Sterling NWS Historical Chronicle The "Knickerbocker Storm" of Jan. 1922

Research by Barbara Watson, WCM

Exactly 150 years after the "Washington and Jefferson Storm" which dropped 3 feet of snow on the region, came the deepest snow of the 20th century to the greater Washington and Baltimore region. The snow came on the heels of a cold spell. High temperatures did not climb above freezing from the 24 through the 28th of January 1922 and the low temperature dipped to 11°F on the 26th. Snow began at 4:30 p.m. on the 27th and continued until just past midnight on the morning of the 29th. A record 21 inches fell in a 24 hour period on the 28th. The heavy band of snow stretched across Richmond (19 inches), Washington, DC (28 inches), and Baltimore (25 inches) immobilizing the region. Strong north to northeast winds accompanied the storm drifting snow into deep banks. Roads were blocked. Main highways were the first to open in 2 to 4 days.

On the evening of the 28th, the weight of the snow became too much for the Knickerbocker Theater on 18th Street and Columbia in Northwest Washington, DC. The horrible scene was described in the Washington Post on January 29th and 30th and was reprinted in the Post on January 19, 1996 following another big snow. They described it as "the greatest disaster in Washington's History". The theater was crammed with an estimated 900 movie goers. The roof of the theater collapsed taking the balcony down with it. Ninety-eight people crushed to death and another 158 were injured. A small boy squeezed into small holes between crumbled cement slabs to give those injured and trapped pain pills. From this disaster, the storm became known as the "Knickerbocker Storm".



**"Baltimore is almost completely storm bound as the result of the heaviest fall of snow in twenty-four hours that the city has experienced since 1872."**  
An account of the January 27-29, 1922 "Knickerbocker Storm" in "Baltimore's Worst Storm in 50 Years," *The New York Times*, January 29, 1922, p.1.

**"the snow along the Pennsylvania lines out of Washington was three feet deep on the level and that the high wind had thrown up drifts on the tracks from twelve to sixteen feet deep."** An account of the January 27-29, 1922 "Knickerbocker Storm" in "Storm Dislocates Railroad Traffic," *The New York Times*, January 29, 1922, p.1.

## Fall 2002 Climate Review

By Dewey Walston, Senior Forecaster

Autumn 2002....The heavens finally open up with beneficial and welcomed rainfall.

Severe drought conditions continued into September and the first half of October. During the second half of October, the weather pattern finally changed and we saw above normal rainfall. The above normal rainfall continued into November bringing an end to severe drought conditions in the region.

Here is the breakdown of rainfall by month for Washington DC.

September	2.10 inches (1.69 inches below normal)
October	5.00 inches ( 1.78 inches above normal)
November	4.34 inches (1.31 inches above normal)

For the autumn season...the rainfall totaled 11.44 inches in Washington which was 1.40 inches above normal. This is in stark contrast to last autumn when Washington had only 2.65 inches of rain. The driest autumn on record in Washington was in 1930 when only 1.83 inches of rain fell. The wettest autumn was in 1934 when 21.78 inches of rain drenched Washington DC.

Here is the breakdown of rainfall by month for BWI airport

September	3.17 inches (0.81 inches below normal)
October	6.01 inches (2.85 inches above normal)
November	3.78 inches (0.66 inches above normal)

For the autumn season, the rainfall totaled 12.96 inches at BWI airport which was 2.70 inches above normal. This is in stark contrast to last autumn when BWI airport had only 3.21 inches of rain. The driest autumn on record in Baltimore was in 1930 when only 1.87 inches of rain fell. The wettest autumn on record in Baltimore was in 1902 when 17.75 inches of rain fell.

Temperatures...

During meteorological autumn (September, October and November) temperatures in Washington DC averaged 59.6 degrees which was 0.5 degrees above normal. The warmest autumn on record in Washington was 1973 when the temperature averaged 63.1 degrees. The coldest autumn on record in Washington was in 1917 when the temperature averaged 52.9 degrees.

During meteorological autumn, temperatures at BWI airport averaged 56.6 degrees which was 0.5 degrees above normal. The warmest autumn on record in Baltimore was 1931 when the temperature averaged 64.7 degrees. The coldest autumn on record in Baltimore was in 1976 when the temperature averaged 53.8 degrees.

## Regional Weather Review July and August 2002

by Michelle Margraf, Storm Data Focal Point

**July 2<sup>nd</sup>-4<sup>th</sup>:** High temperatures rose into the lower to middle 90s and dew points reached into the lower 70s. This resulted in heat index values up to 110 degrees. Heat index values only dropped into the middle 80s overnight in Baltimore and Washington D.C., resulting in little relief for people without air conditioning. In Baltimore County, 14 people died during the heat wave. Two people perished in both Montgomery and Prince George's counties and one person died in both Harford and Prince George's counties.

**July 2<sup>nd</sup>:** Thunderstorms dropped large hail over Highland, Pendleton, and Hardy counties.

**July 5<sup>th</sup>:** A thunderstorm downed trees near Gore in Frederick County, Virginia.

**July 9<sup>th</sup>:** Scattered thunderstorms with high winds downed trees and power lines in Augusta, Albemarle, Loudoun, Frederick (MD & VA), Washington, Carroll, Anne Arundel, Baltimore, Harford, Hampshire, Morgan, and Jefferson counties. In Carroll County, high winds and driving rain toppled several tents at a community festival in Winfield. Ten people were injured.

**July 22<sup>nd</sup>-23<sup>rd</sup>:** Another round of hot and humid weather resulted in heat indexes between 98 and 105 degrees. A total of three people died from the heat in Baltimore County and Montgomery counties.

**July 23<sup>rd</sup>:** Slow moving thunderstorms with heavy downpours flooded creeks and roads in Hampshire, Shenandoah, Frederick (VA), Page, and Albemarle counties. In Page County, golfball sized hail and downed trees were also reported. Lightning caused structure fires in Montgomery County.

**July 27<sup>th</sup>:** Thunderstorms downed trees and flooded roads and creeks in Frederick (VA), Clarke, Fauquier, Fairfax, and Grant counties.

**July 28<sup>th</sup>-August 5<sup>th</sup>:** Heat index values reached 100 to 110 degrees and power companies reported record electrical use. Heat was blamed for buckling train tracks that caused a passenger train derailment in Montgomery County on the 29<sup>th</sup> which injured 97 people. Seven residents of Baltimore County and three residents of Prince George's County succumbed to the heat.

**August 1<sup>st</sup>:** Thunderstorms with high winds downed numerous trees and power lines in Alexandria in addition to Fairfax, Stafford, Prince William, Prince George's, and Charles counties. The heaviest damage was reported in the Mason Neck and Mt. Vernon areas.

**August 2<sup>nd</sup>:** Thunderstorms with large hail and damaging winds downed multiple trees in Allegany, Harford, and Baltimore Counties.

**August 3<sup>rd</sup>:** Numerous thunderstorms with high winds, large hail, frequent lightning, and heavy downpours moved through. Numerous downed trees, power lines and structural damage were reported region wide. One downburst of wind unofficially measured at 89.7 MPH at the Manassas Airport caused significant structural damage. A man standing on his back porch in Frederick (MD) was killed by lightning. Two other Frederick County (MD) residents and two campers in Augusta County were injured after being struck by lightning. In D.C. a man was killed and two women were injured when a large tree fell onto a van.

**August 5<sup>th</sup>:** Thunderstorms downed trees in Warren, Fairfax, Allegany, Frederick (MD), and Montgomery counties. Large hail was also reported in Montgomery County.

**August 12<sup>th</sup>-22<sup>nd</sup>:** A record breaking heat wave pushed heat indexes to near 100 degrees. Three Baltimore City residents and one Prince George's County resident died from the heat.

**August 13<sup>th</sup>:** An evening thunderstorm downed trees in western Allegany County. Early on the 14<sup>th</sup>, a thunderstorm downed trees onto railroad tracks in Montgomery County.

**August 23<sup>rd</sup>:** A downburst of winds up to 70 MPH downed trees near Urbana in Frederick County, MD.

**August 24<sup>th</sup>:** Scattered thunderstorms downed trees and power lines in Spotsylvania, King George, and Charles counties. Several lightning fires were reported in Spotsylvania County.

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