

Blue Ridge Barometer

Welcome to the Spring 2023 edition of Blue Ridge Barometer, the biannual newsletter of the National Weather Service (NWS) office in Blacksburg, VA! In this issue, you will find articles of interest about the weather and climate of our County Warning Area

(CWA), including the highlights of our very mild 2022-2023 winter season and the impact of Hurricane Nicole. You'll also learn about changes to our heat advisories in the mountains, the vital role of a NWS Science and Operations Officer, and the importance of being prepared for flooding in our area. All this plus tips on how to remain safe on the water this summer, and photos from one of our readers. We wish all of you a safe and fun Spring and Summer!

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From the Desk of the Science and Operations Officer

Adam Baker, SOO

Hello everyone! I'm Adam Baker, the new Science and Operations Officer of NWS Blacksburg, or "SOO," which is less of a mouthful. I wear many hats as a SOO, and my days are never dull! While much of my job is ensuring that the latest scientific findings and new technology are infused into forecast operations, there are many other interesting aspects of the role. One is being able to allow for personalized training and growth opportunities among the forecasters. This can span across many program areas including severe weather, climate, hydrology, fire weather, and tropical meteorology. I also have the opportunity to mentor others through research projects that can aid the forecast process or lead to new, helpful tools that are shared with the staff or even other forecast offices.

Another fun part of my role as a SOO is involvement in the student volunteer program. I coordinate with the local office program leader and university academia to provide an immersive experience for students, ranging from launching the balloons for upper air data to shadowing the forecast and warning process. Students can also have experiences out in the field, such as trips for storm damage surveys or assessing possible flood impacts at river gauge sites. Additionally, we line up forecaster-mentored projects that bridge the students' interests with areas that benefit our operations. The program can be huge résumé booster that may help the students launch a career with the National Weather Service in the future. The SOO position must be an adaptive one, because not only are there always developments in science and emerging technologies, but there are also bigger changes in the forecast process and day-today duties. As the SOO for this office, I have the great opportunity to help lead a group of skilled forecasters as we navigate into more enhanced services that better communicate hazardous weather information to the public and other core partners.

The Wayward Winter of 2022-2023

Robert A. Beasley and Amanda Sava, Meteorologists

Winter 2022-2023 will be one for the record books for the NWS Blacksburg County Warning Area (CWA). This winter was unique even before it began, as forecasters predicted La Niña to persist for a third consecutive winter. A "triple dip" La Niña has only occurred two other times since 1950 - during the winters of 1973 through 1976, and 1998 through 2001. Last winter (2021-2022), La Niña brought warmer than normal temperatures and near normal precipitation. The previous winter (2020-2021) saw near normal temperatures and above normal precipitation. This generally follows the trend of typical La Niña impacts to our area: warmer and wetter (Figure 1). The outlook for the winter of 2022-2023 called for above normal temperatures and equal chances of above, below, or near normal precipitation across most of the CWA (Figure 2).



Figure 1: Wintertime La Niña Pattern. Winter refers to December, January, February. Source: climate.gov.

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Figure 2: Temperature and precipitation outlook for Winter 2022-2023 for the United States, issued on October 20, 2022. Winter refers to December, January, February. Source: Climate Prediction Center.

When it comes to winter temperature and precipitation, there are several circulations that impact weather conditions, including the El Niño-Southern Oscillation (ENSO). La Niña, the cool phase of the ENSO climate pattern, brought some warmer than normal temperatures to the NWS Blacksburg However, the Christmas forecast area. holiday was marked by a plunge into near zero degree temperatures and dangerously cold wind chills, as a deep upper level trough brought Arctic air to much of the eastern United States. On average, the month of December saw below normal temperatures at all five of our climate sites (Roanoke, Virginia; Lynchburg, Virginia; Danville, Virginia; Bluefield, West Virginia; and Blacksburg, Virginia). However, the temperature departures swung the other way

for about the first third of January, when temperatures rose to well above normal. Roanoke, Virginia, reached as high as 23 degrees above normal on January 4, 2023 (normal temperature = 38, daily average temperature observed = 61), and Bluefield, West Virginia, was 30 degrees above normal on January 3, 2023 (normal temperature = 32, daily average temperature observed = 62). February was also much warmer than usual, as all five climate sites saw above normal temperatures for most of the month. Lynchburg, Virginia, only had three days during the month with below normal temperatures; Roanoke, Virginia, did not have any days below normal (Figure 3). Upper level ridging and persistent surface high pressure were behind much of this warmer than usual weather in February.













(c) Danville, VA.







For the month of December, the monthly average temperatures for all five climate sites were below normal. Roanoke was the furthest from normal, with 2.3 degrees below the normal monthly average temperature, and Blacksburg was the closest to normal, only 0.3 degrees below the normal monthly average temperature (Figure 4). January and February both had above normal temperatures.



Figure 4: Monthly average temperature departures from December 2022 through February 2023, for the five climate sites of NWS Blacksburg: Roanoke, VA; Lynchburg, VA; Danville, VA; Bluefield, WV; and Blacksburg, VA.

Throughout the three months of winter and into March and April, snowfall for the season was well below normal for all five climate sites (Figure 5). For Bluefield, WV, and Blacksburg, VA, the first trace of snowfall was observed on October 18, 2022. The first measurable amount of snow (an amount of 0.1 inches or higher) for Bluefield, WV, did not occur until almost a month later, on November 13, 2022. Roanoke, VA, saw its first trace of snowfall on November 17, 2022; it didn't see any more than a trace until March 12, 2023, when 0.4 inches of snow was observed. That same day, Lynchburg, VA, and Danville, VA, both reached 0.5 inches, and their snowfall totals remained unchanged for the rest of the season.



Figure 5: Season total snowfall for Roanoke, VA; Lynchburg, VA; Danville, VA; Bluefield, WV; and Blacksburg, VA. December 2022 through April 2023.

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Blacksburg and Bluefield were the two sites with the largest deficits in snowfall compared to normal amounts, with 21.9 inches and 23.1 inches below, respectively. During La Niña patterns, snowfall is around normal, but highly variable. Typically, the stronger the La Niña, the greater the likelihood of below normal snowfall. In a weak or moderate La Niña, snowfall is highly variable. This past winter's La Niña was indeed a weak event (Figure 6).

	La Niña - 25			5.8
*	Weak - 12	Moderate - 6	Strong - 7	*
Ne Nie *	1954-55	1955-56	1973-74	
	1964-65	1970-71	1975-76	
	1971-72	1995-96	1988-89	
	1974-75	2011-12	1998-99	
	1983-84	2020-21	1999-00	***
	1984-85	2021-22	2007-08	%** ^T ∛°**
* *	2000-01		2010-11	: * %
	2005-06			
	2008-09			
A THE AND	2016-17			A ANT AN
T	2017-18			T L
T	2022-23			T

Figure 6: La Niña event rankings based on mean sea surface temperature anomalies. Source: Jan Null, Golden Gate Weather Services <u>https://ggweather.com/enso/oni.htm</u>

In conclusion, the average temperature of the 2022-2023 winter season was indeed warmer than normal, which is what is expected in a La Niña winter for southeast West Virginia, Southwest Virginia, and Northwest and Central North Carolina. While seasonal averages are very important especially when it comes to their impact on the climate, we are

affected by the weather on a day to day basis. So while we may remember this winter as being warmer and drier than average, we will perhaps recall more specifically the Christmas cold snap, almost-summerlike temperatures in February, and the few days of snow flurries, when none seemed to stick on the ground.

Hurricane Nicole: A Major Late-Season Surprise

Robert A. Beasley, Meteorologist

Our seasons of late have been anything but ordinary. Parts of the forecast area saw more snow in March and April than in the typically coldest and snowiest winter months of December through February. Contrast this meteorological anomaly with New Year's Day 2023, typically the dead of winter, when temperatures were in the 60s. We witnessed temperatures in the 80s as early as March in parts of the Virginia and North Carolina Piedmont, while late March and early April brought very cold, well-below freezing temperatures to much of the forecast area. Remember October 2019, when temperatures were in the mid 90s for four days? Summers with 40-degree temperatures and winters with 70-degree temperatures are not as uncommon as one might think here in the central Appalachians. Such extremes are just part of the normal variability in the weather patterns from year-to-year and season-toseason.

One such variability brought a rare November hurricane, Nicole, to the U.S. in November 2022 (see Figure 1). Overall, the 2022 Atlantic basin hurricane season was rather quiet. Major category 5 Hurricane Ian

punctuated what was otherwise a rather benign tropical season compared to prior years, including 2004, 2005, and 2018 2021. While the Atlantic basin hurricane season extends from June 1 through November 30 each year, Nicole was the first hurricane to make landfall within the continental U.S. during the month of November since Hurricane Ida in 2009 (see Figure 2). Only ten tropical storms and three hurricanes have struck the U.S. during the month of November going all the way back to 1851, the beginning of the current database. Mathematically, hurricane on average, this equates to a U.S. landfall occurring about once every 10 to 15 years. However, as with all types of weather, there are anomalies. In 2005, three tropical storms formed in the Atlantic basin during November, with one becoming a hurricane. Hurricane Kate (see Figure 3) in 1985 was the latest November hurricane to ever strike the U.S. mainland, making landfall in the Florida Panhandle on November 22. Kate is among some of the more recent tropical storms and hurricanes to impact the U.S. during the month of November, including Eta in 2020, Ida in 2009, and Paloma in 2008.



Figure 1: Track, wind swath, and intensity for Tropical Cyclone Nicole – November 2022. Image courtesy of NOAA/NCEP/National Hurricane Center, Miami, FL.



Figure 2: The last significant November hurricane prior to Nicole to affect the continental U.S. was Hurricane Ida in November 2009. Hurricane Ida brought very heavy rainfall to the eastern and southeastern U.S. following what had already been a record wet fall. A station just northwest of Hampton, VA recorded 18 inches of rainfall from the remnants of Hurricane Ida. Image courtesy of NOAA/NCEP/National Hurricane Center, Miami, FL.

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Figure 3: Hurricane Kate was one of the latest significant hurricanes to strike the U.S. during the calendar year, making landfall along the Florida coast on November 21, 1985. (Image courtesy of NOAA/NCEP/National Hurricane Center, Miami, FL.)

Nicole initially formed as a subtropical system from an area of synoptic low pressure which drifted off the Mid-Atlantic coast in early November, and then southward into the tropical Atlantic. The system quickly took on tropical characteristics and was named by the National Hurricane Center on November 7, 2022. The system intensified to a Category 1 hurricane (winds 74 to 95 mph) and made landfall shortly after midnight on November 10, 2022 near Vero Beach, Florida. Nicole

then weakened to a tropical storm and tracked west-northwest across the Florida Peninsula to off the northwest coast of Florida over Cedar Key. The remnants of Nicole then tracked north across western Georgia into eastern Tennessee as they became caught up in an advancing frontal system bringing strong gusty winds and heavy rainfall to much of the eastern United States (see Figure 1 and Figure 4).



Figure 4: Tropical Cyclone Nicole brought excessive rainfall to Puerto Rico before meandering its way westward toward the U.S. mainland, making landfall in Florida as a Category 1 late season November hurricane before weakening to tropical cyclone and then a tropical depression as it tracked northward through the Appalachians. It brought wind and heavy rainfall to much of the eastern U.S.. (Image courtesy of NOAA/NCEP/National Hurricane Center, Miami, FL).

Weather Witticism

In 1959, the Florida panhandle was hit with a devastating hurricane. Many of the buildings and homes in Destin were damaged or destroyed. The "Gulfarium," which had opened a few years earlier, was largely undamaged. Their diesel generators were meant for the numerous fish and marine mammals, but could easily handle a larger load. So, a tent city was set up in their parking lot for displaced families. A fish supplier in Pensacola was asked to increase shipments to feed not only the marine life in the building, but the hundreds of people in the parking lot. For all in tents and porpoises, it worked pretty well.



Criteria for Heat Advisories and Excessive Heat Warnings Lowered in the Mountains

Phil Hysell, Warning Coordination Meteorologist

Did you know that the number one weather killer in the United States is extreme heat, with nearly 200 people killed in 2021? To learn more:<u>https://www.weather.gov/hazstat/</u>

Previously, the National Weather Service (NWS) in Blacksburg issued heat advisories across our entire forecast area when the heat index was predicted to reach between 105 and 109 degrees. NWS meteorologists issued excessive heat warnings when the heat index was forecasted to reach or exceed 110 degrees. Data obtained by the Virginia Department of Health indicated emergency room and urgent care visits for heat related illnesses were occurring when heat index values were lower than our criteria, especially in our mountain counties.

Based on this information, along with feedback from county and regional Emergency Managers, these heat headlines were lowered for our mountain counties on May 15, 2023. Meteorologists will now issue a heat advisory when heat index values are expected to reach 100 to 104 degrees, and they will issue an excessive heat warning when the heat index is expected to reach or exceed 105 degrees. This change will be in effect for the following counties:

In Virginia: Alleghany, Bath, Bland, Carroll, Craig, Floyd, Giles, Grayson, Montgomery, Pulaski, Smyth, Tazewell, and Wythe.

In North Carolina: Alleghany, Ashe, and Watauga.

In West Virginia: Greenbrier, Mercer, Monroe, and Summers.

The criteria for our Piedmont counties will remain unchanged. To see a map of our new heat headline criteria and learn more about this change, please visit:

www.weather.gov/rnk/heatheadlineschanges

To learn more about the dangers of extreme heat, please visit:

https://www.weather.gov/safety/heat



Excessive Rainfall Outlooks

The spring through the late summer brings heavy rain producing showers and storms and potentially very heavy rainfall from the remnants of tropical systems across the area. How can you be best prepared for the threat of flash flooding? Our office is proactive by including information about the potential of floods and flash floods in our <u>Area Forecast</u> <u>Discussions</u>, <u>flood watches</u> or <u>flash flood</u> <u>warnings</u> as needed. We ask that you take heed of any flooding concerns we share with you in these products. There is also a way you can quickly assess the potential for flash flooding anywhere across the country. Our partners at the <u>Weather Prediction Center</u> (WPC) in College Park, MD, issue <u>Excessive</u> <u>Rainfall Outlooks</u> (EROs). These outlooks appear on a map of the contiguous United States with drawn colored regions on it (Figure 1).



Figure 1: Contiguous United States map with WPC's ERO for the Day 2 Excessive Rainfall. Source: NOAA's Weather Prediction Center.

These regions show where there is an increased risk of flash flooding. Any location contained within one of the colored areas can expect flash flooding to be possible, out to a 25 mile radius of that location, by the percentage that corresponds to the color of the region. There are four colors you may see on an ERO map, each with its own threat category: green for marginal, or MRGL;

yellow for slight, or SLGT; red for moderate or MDT; and violet for high, or HIGH.

Each of these categories expresses both the probability of flash flooding occurring within a 25 mile radius of a given point in the colored area, and also the potential magnitude of flash flooding, if it happens (Figures 2 and 3).



Figure 2: The four ERO threat categories and their respective colors, plus a description and depiction of this coverage, and photo examples of each type of flooding. Source: NOAA's Weather Prediction Center.



Figure 3: The corresponding colored probabilities of flash flooding occurring within 25 miles of a given point for each of four threat categories. Source: NOAA's Weather Prediction Center.

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The WPC issues new EROs three times a day: early morning, late morning, and evening. They issue additional EROs as needed to address any changing flooding concerns. EROs are valid for a time span lasting 24 hours, and are issued for multiple individual days. When accounting for the conversion of Z-time to Eastern Standard Time, the "Day 2" ERO depicted in Figure 1 was issued at 1:48 AM EST on Wednesday, February 23, 2022, but is valid for the time range from 7:00 AM EST on Thursday, February 24, 2022, through 7:00 AM EST on Friday, February 25, 2022. EROs are available for "Day 1," "Day 2," "Day 3," and the experimental forecasts for "Day 4" and "Day 5."

So, what is the best way for you to make use of the ERO? Look at the ERO as the big picture - the broad scale risk of flash flooding for a particular region of the country. Then, to obtain the finer details for your specific area of interest, visit the corresponding NWS office's web page to review the discussions, watches, and warnings the office may have created for that area. You can do this by visiting <u>weather.gov</u> and then clicking on your area of interest.

Weather Trivia

What do you call the clouds that people mistake for UFOs? Lenticular clouds.

What do you call a wall of dust that is many times is accompanied by a blue sky? A haboob.

What is the official term for the smell that accompanies rain? Petrichor.

What is ombrophobia? An extreme fear of rain.

What are the three main tornado types? Rope, cone, and wedge tornadoes.

How far away from a thunderstorm can you be and still be struck by lightning? Lightning can travel 10 to 12 miles from a thunderstorm.



Safety at Sea: Boating Tips

Stacie Hanes, Lead Meteorologist

Before setting out on the water this summer, you can check your local forecast from NWS Blacksburg at <u>weather.gov/rnk</u> or <u>mobile.weather.gov</u> or listen to your NOAA Weather Radio. On days when thunderstorms are predicted, frequently check the weather forecast for Severe Thunderstorm, Tornado, or Flash Flood Watches and Warnings. As a friendly reminder, watches mean there are growing concerns of severe weather, and you should remain alert. Warnings mean there are imminent threats, and you should take



cover immediately. If storms are in the forecast, your best bet is to stay on shore.

Here are some things to keep in mind this summer:

Lightning injuries and deaths are more likely on open water than on land.

Lightning can strike ten miles or more from a thunderstorm. If you can hear thunder, you are close enough to be struck by lightning!

If your boat has a cabin, stay inside and away from metal or electrical devices. If your boat doesn't have a cabin, stay low.

Warnings are *not* issued for lightning – it's up to you to take cover!

Severe thunderstorms can include: wind gusts of 58 mph or more, 1" hail or bigger, and/or tornadoes.

Strong winds may strike suddenly and could occur well ahead of any thunder or lightning.

If storms are imminent while you're on the water, make sure all passengers are *wearing* life jackets, turn on your required navigation lights, and head towards shore. If you get caught in a storm and are unable to return to shore safely, anchor your boat.

Also, please keep in mind:

85% of those who drown were not wearing a life jacket.

Two-thirds of drowning victims were said to be good swimmers.

Even if the air is warm, the water can still be much colder since it takes significantly longer for water to heat up. Cold water can be dangerous.

Body heat can be lost four times faster in cold water than cold air.

Wearing a life jacket *significantly* increases chances of surviving cold water.



Remember to grab a life jacket and to *wear it!*

If in cold water, stay calm, swim to safety if able, or conserve energy and heat while waiting for rescue.

To avoid heat-related dangers, stay on shore during the hottest time of day, usually between noon and 4 PM. Use sunscreen, drink plenty of water, and take frequent breaks. Wear lightweight, loose-fitting, and light-colored clothing. Remember you can get burned from the glare off the water, too!

Fog can make navigation on the water a challenge by reducing visibility to as little as a few feet. It can form quickly and catch boaters off guard. Slow down to avoid collisions and turn on all of your running lights. Listen for other boats or buoys that may be nearby. Pay close attention to NOAA Weather Radio for important information concerning formation, movement, or dissipation of the fog. Please also visit our Inland Lake Weather Safety page for more safety tips and resources.



Kidz Korner

Whether the day is sunny, rainy, stormy, snowy, or cloudy, there is one common weather feature they all share: WIND! Sometimes the wind is very light, and sometimes it is very strong. Meteorologists use special instruments to measure the wind speed. You'll hear or see the wind speed spoken or displayed by TV meteorologists during the news broadcast. You may also see it displayed on a variety of online weather sources. But what if you want to know what the wind speed is where you are located, at that very second? Is there a way for you to do that? The short answer is, yes! You can use the Beaufort Scale.

Over 200 years ago in 1805, a British Naval Officer, Sir Francis Beaufort, developed a way of estimating wind speed based upon visual clues of the ocean. The method included observing whether there were waves on the ocean, the height of any waves, and how foamy the waters were. From these observations, he developed different "force categories" of wind speed. These categories ranged from Category Zero for calm wind to Category Twelve for hurricane wind.

Here is a list of the different Beaufort Force Categories, including the name of the category, its wind speed range in miles per hour, and its on-land visual clues:

Category 0: "Calm" - 0 mph -Smoke rises straight up.

Category 1: "Light Air" – 1 to 4 mph – Smoke drift indicates wind direction, wind vanes are still.

Category 2: "Light Breeze" – 5 to 7 mph – Wind felt on face, leaves rustle, wind vanes begin to move.

Category 3: "Gentle Breeze" – 8 to 12 mph – Leaves and small twigs constantly moving, light flags extended.

Category 4: "Moderate Breeze" – 13 to 18 mph – Dust, leaves, and loose paper lifted, small tree branches move.

Category 5: "Fresh Breeze" – 19 to 24 mph – Small trees covered in leaves begin to sway.

Category 6: "Strong Breeze" – 25 to 31 mph – Larger tree branches moving, whistling heard in overhead wires.

Category 7: "Near Gale" – 32 to 48 mph – Whole trees moving, resistance felt walking against wind.

Category 8: "Gale" – 39 to 46 mph – Twigs breaking off trees, generally impedes progress walking.

Category 9: "Strong Gale" – 47 to 54 mph – Slight structural damage occurs.

Category 10: "Storm" – 55 to 63 mph – Trees broken or uprooted, considerable structural damage.

Category 11: "Violent Storm" – 64 mph to 72 mph – Widespread structural damage.

Category 12: "Hurricane" – 85 mph and higher – Considerable and widespread damage to structures. So, the next time you step outside, see if you can determine what the wind speed is at your location. How does your reading compare to what you are seeing and hearing on TV or online? If there is a difference, what do you think could be the cause?

If you or a family member ever determine that winds in your area are Category 10 or higher, please take shelter inside the lowest level of your home or a sturdy building! Additionally, if safe to do so, please have an adult contact us at (866) 215-4324 to provide this wind information. We will share your report with others so they too can seek shelter from the storm.



Weather Words

Anemometer: An instrument that measures wind speed.

Cumulus Cloud: A cloud in the shape of individual detached domes, with a flat base and a bulging upper portion resembling cauliflower.

Front: The transition zone between two distinct airmasses. The basic frontal types are cold fronts, warm fronts, and occluded fronts.

Gust: A brief sudden increase in wind speed. Generally, the duration is less than 20 seconds and the fluctuation greater than 10 mph.

Straight Line Winds: Damaging winds produced as air rushes downward from a thunderstorm. Often called gust fronts, downburst, or microburst winds, these winds originate from thunderstorm downdrafts and may produce damage similar to that of a tornado.

Supercell: A highly organized thunderstorm with a rotating updraft, known as a mesocyclone. It often produces large hail, strong winds, and tornadoes, and poses a large threat to life and property.

Zephyr: A word often used in literary works to describe a soft, gentle breeze.

The Mistaken Anemometer

Anonymous

A little anemometer On the weather-bureau high Was set to measure off the wind That whistled through the sky. As the wind blew hard or the wind blew soft, So swift he turned or slow,

And just the number of miles an hour His dial-plate would show.

But the little anemometer On the weather-bureau tall Decided, very innocent, 'Twas he that did it all. So when the wind blew a hurricane— "I'm a terrible fellow!" he cried; And when the wind was a zephyr mild— "I'm too tired to blow," he sighed.

Until one melancholy day A little breeze, in fun, Twisted the anemometer So that it couldn't run; And thus it learned that the heavens work On an independent plan, And it grew to be a modest machine And ceased to be like a man. Feeling creative? Would you like to see your art or writings included in the next edition of Blue Ridge Barometer? If you are between the ages of 3 and 17, we would love to see your hand-drawn artwork, short poems, or short stories about the weather. For the next edition, we are looking for art and writings that involve the fall or winter.

Our meteorologists will review the submissions and select a few to include in the newsletter. Maybe yours will be one of them!

To submit your original drawing, poem, or story, scan your artwork or writing into a .jpg computer image file (with the help of an adult, if needed). You can also write your poem or story using Word and save it as a .doc or .docx file. Please keep any written material to 500 words or less. Artwork may also be completed using drawing or painting software, submitted as a .jpg file.

When submitting your drawing, poem, or story, please include your first name and first initial of your last name, age, and the city/town where you live. All entries should be submitted no later than October 1, 2023. Please email your entries here.

We look forward to hearing from you!





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From Piedmont to Mountaintop

In this edition, we have three pictures submitted by one of our dedicated readers. Thank you to Alaina K. for the beautiful photos she shared with us from Daleville, Virginia!



Morning rainbow over Daleville, VA – February 21, 2023



A beautiful day at the Greenfield Recreation Center, Daleville – February 28, 2023



Snow on forsythia blossoms, Daleville – March 12, 2023



Do you enjoy taking weather pictures in your neighborhood? If so, we would really enjoy seeing them! From now through October 1, 2023, we invite you to take some weatherrelated photos and share them with us. Please include with your photos your first name, the first initial of your last name, and where and when you took the picture. We will include your photos in upcoming newsletters and credit them appropriately. Also, by submitting a picture, you agree that we can use it on one of our social media platforms (Facebook and Twitter) or in our local community outreach presentations (for example, a SKYWARN class). Photos used in these forums will also be credited appropriately.

Stay Safe & Stay Involved!

The spring and summer seasons not only bring warmer temperatures, but a wide range of potential weather hazards, including flooding, lightning, and even tornadoes. Check out the NWS <u>Weather</u> <u>Safety page</u> for information on all types of weather hazards. If you are interested in helping the NWS with storm spotting and verification, please consider participating in the <u>SKYWARN</u> program. Additionally, the NWS can always use new rain observers for the <u>CoCoRaHS</u> network, especially in West Virginia!

To keep up to date on what's happening in our office in between newsletters, please visit our website: <u>https://www.weather.gov/rnk</u> or follow us on <u>Twitter</u> and <u>Facebook</u>.

For questions or comments about this newsletter, please contact the <u>editor</u> or via snail mail at:

Blue Ridge Barometer

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