

# Stormbuster

NATIONAL WEATHER SERVICE ALBANY, NY



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## Meet a Meteorologist

### INSIDE THIS ISSUE

Meet a Meteorologist	1-3
Winter 2021-2022 Review	3-5
2021 Tornado Review	5-7
Rip Current & Safety	8
Word Search & Word Scramble	9-11



-Lee Picard, Meteorologist



-Joy Lee, Administrative Support Assistant

Welcome to “Meet a Meteorologist!” This is where you will get to know fun facts about some of our staff members. In this edition, we introduce Joy Lee, our new Administrative Support Assistant, and Lee Picard, our newest Meteorologist!

### Lee Picard—New Meteorologist

#### When did you first become interested in Meteorology?

When I was in middle school back home in Virginia in 2003, we had a particularly snowy February with almost 30” (which is a lot even by Albany standards!). I remember checking the weather every evening to see if we were due for another snowstorm and day off from school. Only a few months later in mid-September, we were hit by Hurricane Isabel as the storm tracked inland after making landfall in North Carolina’s Outer Banks. I was glued to news coverage of the storm and, after losing power, to the windows watching as sheets of rain blew down the street. From that point on, I was hooked. I consider myself lucky to have grown up somewhere with such diverse weather which gave me the chance to experience firsthand a wide variety of conditions, from heavy winter snows to severe thunderstorms, drizzly fall days to sweltering summer humidity.

#### Where did you go to college and where did you work before the NWS at Albany?

I’ve been to some pretty diverse places! After growing up in Virginia, I moved down to South Florida to attend the University of Miami where I earned my bachelor’s degree in meteorology and applied mathematics, and then all the way to the opposite corner of the country to do my graduate work at the University of Washington in Seattle where I earned my master’s degree in atmospheric science. Upon finishing school, I had the amazing opportunity to work as a meteorologist for the US Navy’s Fleet Numerical Meteorology and Oceanography Center (FNMOC) in Monterey, CA. At FNMOC I worked with a talented team of devoted civil servants for six years to ensure our armed forces at home and abroad had accurate, timely, and reliable atmospheric and ocean model data to support safe operations of all kinds. My focus was primarily in the realms of regional atmospheric and wave modeling, working with both scientific software developers and our forecaster customers. It was such a privilege to work with our men and women in uniform – I met some incredible Naval and Marine Corps officers and hope to have left them with even a fraction of what they taught me.

#### What do you enjoy most about coming to NY (from CA)?

I’m so excited to again live somewhere that experiences a wide variety of weather across all four seasons. As a meteorologist, I’ve really missed those experiences

*Continued on Page 2*

those experiences – I’ve gone as far as getting up at 3AM to see an overnight thunderstorm in Seattle and driving for hours to the Sierra Nevada to have a few days of snow. I’m an avid traveler as well, and I’m looking forward to exploring new places around the region; in particular I’m counting down the days until I make it to Acadia National Park in Maine or can organize a trip north to Montreal.

#### **What will you miss the most about Monterey, CA ?**

Monterey is an absolutely gorgeous place. I’m certainly going to miss the views of Monterey Bay out the window and the 20 minute drive to the stellar sights and outdoor activities along the Big Sur coast. I’ll even miss the fog season from the “June gloom” through “No-sky July” to “Fog-ust”; driving into a wall of fog made for an exciting commute when the timing was right. California as a whole is also just an incredibly diverse and beautiful state, with destinations urban, alpine, desert, forested, and everything in between. I’ll particularly miss trips to Lake Tahoe, Yosemite, and Death Valley; the opportunities for outdoor recreation are almost unbeatable.

#### **What aspect of weather do you enjoy the most? Any favorite storms or historical weather events?**

The better question for me is what aspects of weather I don’t enjoy. I love winter weather and I was thrilled to get 6” of snow on my second full day in town after moving here. I’m eagerly awaiting convective season and I can guarantee I’ll be giddy to hear thunder for the first time in far too long. Tropical weather has long been a favorite of mine as well thanks to my time in Florida. (And my undergraduate mascot is the Hurricanes – how could I not enjoy a tropical cyclone?) After spending the last few years in perpetual drought, I find myself getting excited even just for a little rain! One of my favorite weather memories was when I experienced an hour of thundersnow after spending a day at the South Rim of the Grand Canyon. I happened to drive at almost the same speed as the storm and traveled with it eastbound on Interstate 40 all the way to Flagstaff, Arizona. It was a blast!

#### **Do you have any hobbies? What do you like to do in your spare time?**

I’m an avid traveler and am always looking for somewhere to visit for a day trip or for a couple nights. I enjoy exploring cities and towns on foot and love to find little local places for food (and local breweries, if I’m lucky). I also aspire to visit as many National Parks and Monuments as I can. Living out west gave me a fantastic opportunity to see so many amazing places that have been set aside for recreation and preservation. I managed to stop at three new National Parks on my drive east and I’ve already planned a trip down to Great Smoky Mountains National Park later this spring! I’m also somewhat of a bookworm; my stack of books I want to read seems to always be growing taller because I find it difficult to leave a bookstore empty-handed. My reading interests run the gamut, but I have a soft spot for historical fiction and suspense novels.

#### **What are you most excited about working for the National Weather Service?**

My favorite thing about working in operational meteorology at the NWS is the constantly changing weather. Seeing dynamic conditions all throughout the year keeps me engaged in the work and I enjoy the fact that every day brings something new to the forecast. It was the physics of fluid motions that first fascinated me in high school and college and changed meteorology from a passion into a career ambition, and being able to see the complex interactions I studied happening in real-time out in the real atmosphere is beyond exciting.

#### **What are your career goals/hope to accomplish in the National Weather Service?**

I hope to build a successful career in forecasting with the National Weather Service. I feel so privileged to be able to work in a field that I find so captivating and I’m eager to build the local expertise necessary to make reliable and accurate forecasts. The organization of the NWS into forecast offices that are able to leverage decades of experience and deep knowledge about local conditions, patterns, and trends serves to benefit the general population through enabling highly skilled forecasts, and I can’t wait to contribute to the successful operation of the NWS ALY Forecast Office.

- Lee Picard, Meteorologist

### **Joy Lee—New Administrative Support Assistant**

#### **Where did you work before joining the NWS Albany staff?**

A few months after graduating high school, I started my federal career as a Co-Op Student with the Department of the Navy in Kings Bay, Georgia. After finishing my degree and completing my student agreement, I was converted into a permanent position as a Financial Clerk within the Comptroller Department. After several years I transferred to the Department of Treasury at the Federal Law Enforcement Training Center in Glynco, Georgia as a Requisition Coordinator. I left federal service for many years to be a stay-at-home mom, go back to school, explore other industries and later pursue my interests working for non-profit organizations. In 2020, when I relocated to New York, I reinstated back into the federal government and worked as an Admin Assistant for the Army Corps of Engineers at the Troy Lock and Dam until joining the NWS at Albany in February 2022.



-Joy Lee, Administrative Support Assistant

Continued on Page 3

**How long have you worked for the Federal Government?**

This month (May 2022) I hit my ten-year federal service mark!

**Did you go to college locally, regionally or nationally? Did you serve in the military?**

I earned my Associate degree in Liberal Arts from Georgia Military College at the Kings Bay Naval Submarine Base in Georgia, and my Bachelor degree in Business Administration from University of Phoenix in Honolulu.

**What about NWS Albany caught your interest?**

When I saw this position announced, I was very curious because I honestly did not know the NWS had an office in Albany. Since I know nothing about weather, I thought this would be a great opportunity to be exposed to and learn about something completely new to me.

**What do you enjoy most about NWS Albany?**

I've been here now about three months, and I've really enjoyed how welcoming and supportive everyone has been. It's just a comfortable environment to come to every day.

**What are you most excited about working for the National Weather Service?**

I am really excited how the Administrative staff is supported in this region of the NWS. The first emails I received on my first day were other ASAs reaching out to welcome me. I've never been assigned a mentor with any other position I've held, nor have I ever had regular meetings with other Admins. Having both these practices, as well as the quick willingness of other ASAs to answer questions, I feel has set me up for success from the start.

**Your position at the NWS involves a lot of multi-tasking. How do you stay organized and on top of deadlines?**

I'm very old-school in keeping myself organized. I use a notebook to keep everything I need to remember in one place. At the end of each work week, I write down all the deadlines and tasks I need to perform the following week. This helps me prioritize and manage my time throughout the week. As I complete each task, I check off that box. I am a visual person, so I use multi-colored pens to take notes, color coordinate all my files making it easy to locate things, and label everything with a label maker.

**What tips can you offer to others who need to become better organized and/or improve time management?**

For anyone who needs to be more organized and organize their time better, I suggest categorizing tasks when possible, keep lists, and plan ahead. Just simply blocking off specific times for each task can keep you on track. Add them to your calendar like an appointment.

**What aspect of weather do you enjoy the most? Any favorite storms or historical weather events?**

In 2006, while I was living on Oahu it rained for 41 days straight! I have never seen anything like it. The entire island was overwhelmed with flooding and mudslides. When it began my car was parked on the street in front of my house, but as the water started to rise on the street and into my yard, I had to move my car further and further back from the street. When it finally ended, the water was about 20 feet from my front door and my car was parked just outside my front window!

**Do you have any hobbies? What do you like to do in your spare time?**

I enjoy going to the gym and bike riding. When the weather is warmer I try to get outside as much as possible, maybe do a hike or nature trail. I love to read so I am a regular at the library. I also enjoy sewing so my daughter and I go thrifting to find clothes we like and I will alter, embellish or repurpose them to make them unique.

- Joy Lee, Administrative Support Assistant

**Winter 2021—2022 Review**

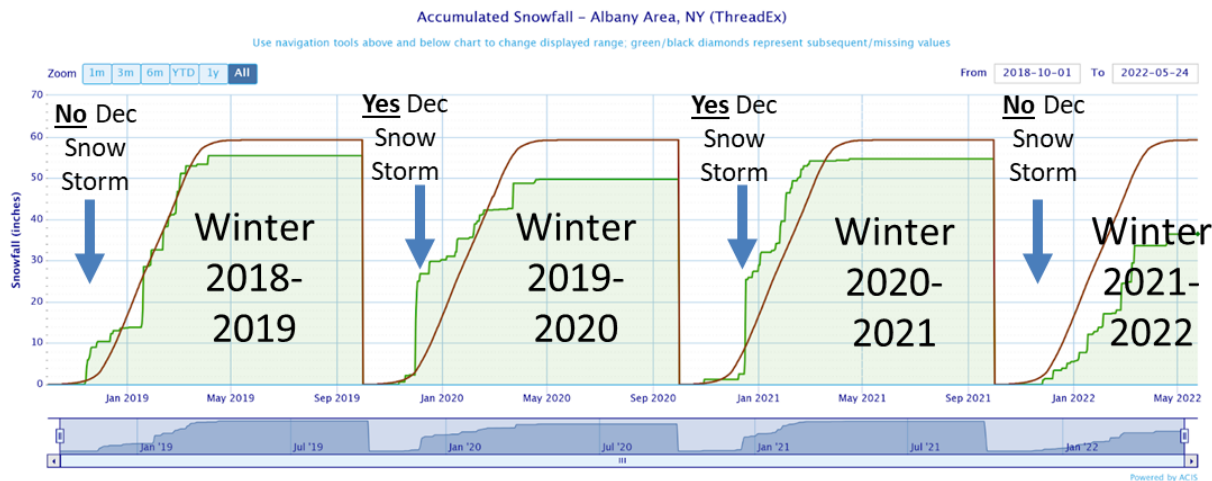
The winter of 2021 - 2022 ended up being rather tame with most of eastern NY and western New England receiving generally below normal snow amounts. In fact, the Albany International Airport, which records official snow measurements for the New York State Capital, only measured a total of 36.4 inches for the entire season. This is 22.8 inches below the 30 year (1991–2020) seasonal average of 59.2 inches. Unlike the past two winters, this is the first winter since the 2018-2019 season that did not record a historic snowstorm in December. See the graphs on page 4 for details and a seasonal comparison.



- Christina Speciale, Meteorologist

Continued on Page 4

## Winter 2021—2022 Review

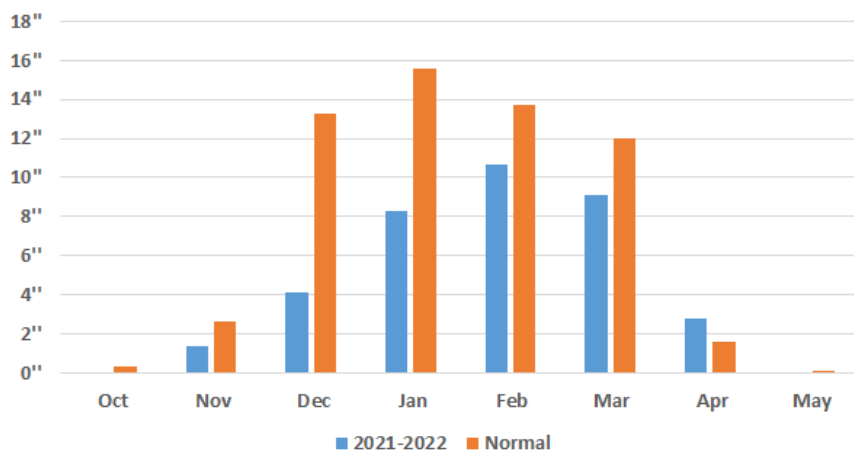


Interestingly, it took until January 8th for Albany to record a 2 inch snow depth and it was not until January 17th that the city reported a calendar day with more than 2 inches of new snowfall. However, a stretch of cold temperatures encompassed much of the region by the middle of January and a snow depth of at least 1 inch was maintained for nearly a month until February 13th. The coldest temperature during this period occurred on February 22 with a morning low temperature of -6°F. The chilliest daytime high took place on January 29 when the mercury only rose to 11°F.

Despite a lack of blockbuster snowstorms from December through February, a major sleet and freezing rain event occurred February 3 - 4 which resulted in thousands of power outages in a rather concentrated area in and around Kingston, NY. This was a remarkable and rare event given that it produced multiple hours of sleet for the I-90 corridor, including the Greater Capital Region, and freezing rain further south in the mid-Hudson Valley and parts of the Taconics. Despite the Albany area only measuring 2 - 4 inches of combined sleet and snow, the high density of sleet exasperated clean-up efforts.

The largest snow event of the season for most of the Hudson Valley took place on February 25 when 4 - 8 inches of snow fell. However, two back to back snowstorms during the first half of March produced enough snow amounts to result in hazardous driving conditions. First, an “overachiever” event on March 9 produced 3 - 6 inches of snow that led to a slippery Wednesday afternoon commute home followed by a well-forecasted 4 to 8 inch event on Saturday March 12 that delayed some St. Patrick Day festivities.

Albany, NY: 2021-2022 Monthly Snowfall v. Normal

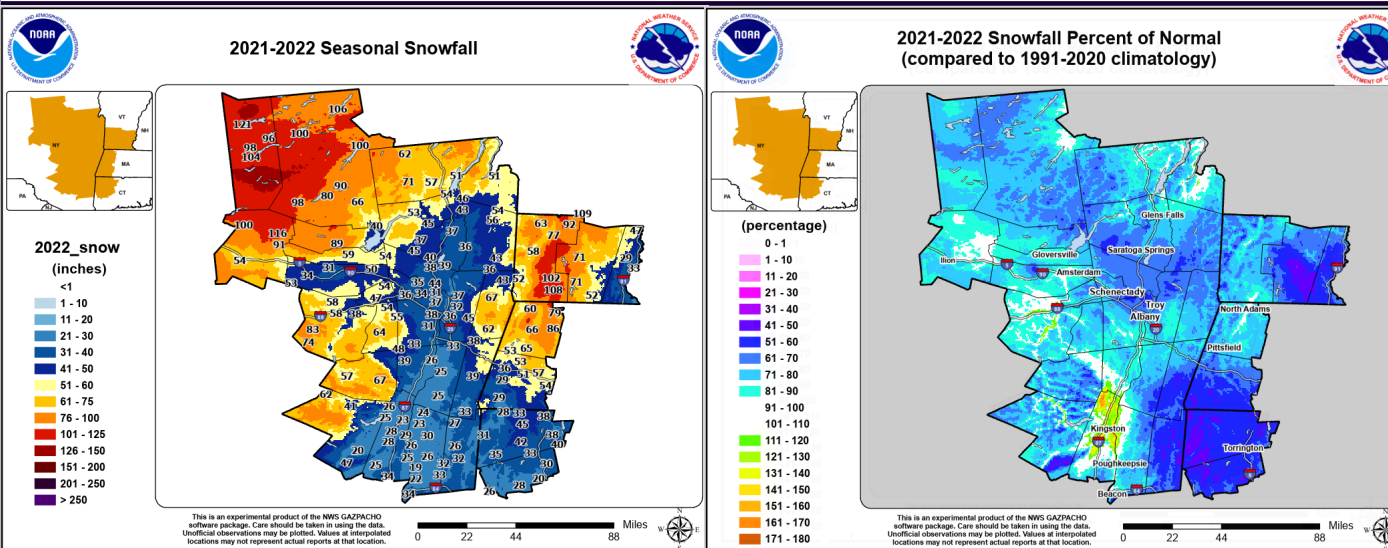


The final winter storm of the season was an impressive elevation-dependent event in mid-April where most of the southern Adirondacks, northern and eastern Catskills, Helderbergs and parts of the Upper Hudson Valley reported an impressive 8 to 16 inches of wet snow. This led to power outages, as the weight of snow caused tree limbs to bend and break. The valley areas did not escape unscathed, receiving 1 to 3 inches of wet, sloppy snow. Interestingly, April was the only month that Albany recorded above normal monthly snowfall over the entire winter. This event produced 2.8 inches for April, compared to the climatological normal of 2.1 inches. See the chart to the left for details.

- Christina Speciale, Meteorologist

Continued on Page 5





The map above on the left shows the overall seasonal snowfall for all of eastern NY and western New England with the map to the right highlighting the snowfall departures from normal.

- Christina Speciale, Meteorologist

### The 2021 Tornado Season Across Eastern New York & Western New England

(source(s): NOAA/NCEI Storm Data and NWS at Albany Public Information Statements)

The National Weather Service (NWS) at Albany forecast area includes east-central New York (NY) and western New England (southern Vermont, the Berkshires of western Massachusetts, and Litchfield County in northwest Connecticut (CT)). A total of 3 tornadoes occurred in 2021 within the NWS at Albany forecast area and none touched down between May 1<sup>st</sup> and August 31<sup>st</sup> which is a bit unusual.

There were two tornadoes that occurred in eastern NY and western New England on April 21st. One occurred near the town of Amenia in Dutchess County, NY, where an EF-1 tornado touched down for a little over a half mile (0.64 mile) with a 100-yard width and causing damage to several homes including ripping a roof off a restaurant. At one point along the path length, nine out of ten homes on a street in the Amenia received damage. One home had partial roof damage with a two by four board and a small branch driven into the side of the home. A strong mid-April storm system was responsible for the severe thunderstorms in the mid-Hudson Valley, southern Taconic and portions of western and southern New England. Thunder snow would also occur across the area with the passage of the cold front. Light snow accumulations would occur north of the Capital District with up to 4 inches in the southern Adirondacks in Hamilton County, NY. A second tornado would occur in Litchfield County, CT. An EF-0 tornado with maximum estimated winds of 85 mph would touch down just north of Bulls Bridge and move eastward into south Kent. The tornado had a path length of one mile and a width of 30 yards. This tornado caused mainly tree damage. The severe thunderstorms across the county would down trees and power lines with around 5,000 people estimated losing power. This tornado touched down sporadically along a path which began near Route 7 just north of Bulls Bridge. Along the path length, a few hardwood or softwood trees were snapped and uprooted. A car tent canopy was blown over and one person lost part of a solid wooden fence. This EF-0 tornado was the earliest one on record in terms of the calendar in a year for the state of Connecticut going back to 1950 in *Storm Data*. On November 12<sup>th</sup>, an EF-1 tornado with maximum estimated winds of 100 mph would occur in Dutchess County in the southern Taconics in the town of Washington. A strong cold front would move through in the late morning with some isolated thunderstorms producing this tornado that had a path length close to 2.5 miles (2.44 miles) going from 1 mile south-southeast Mabbettsville to 2 miles south of Lithgow. The tornado touched down about 1112 AM EST and was on the ground for a few minutes. Numerous trees were snapped or uprooted. Some cars and homes were damaged by falling trees. A shed was destroyed at a farm. No injuries or fatalities were reported.

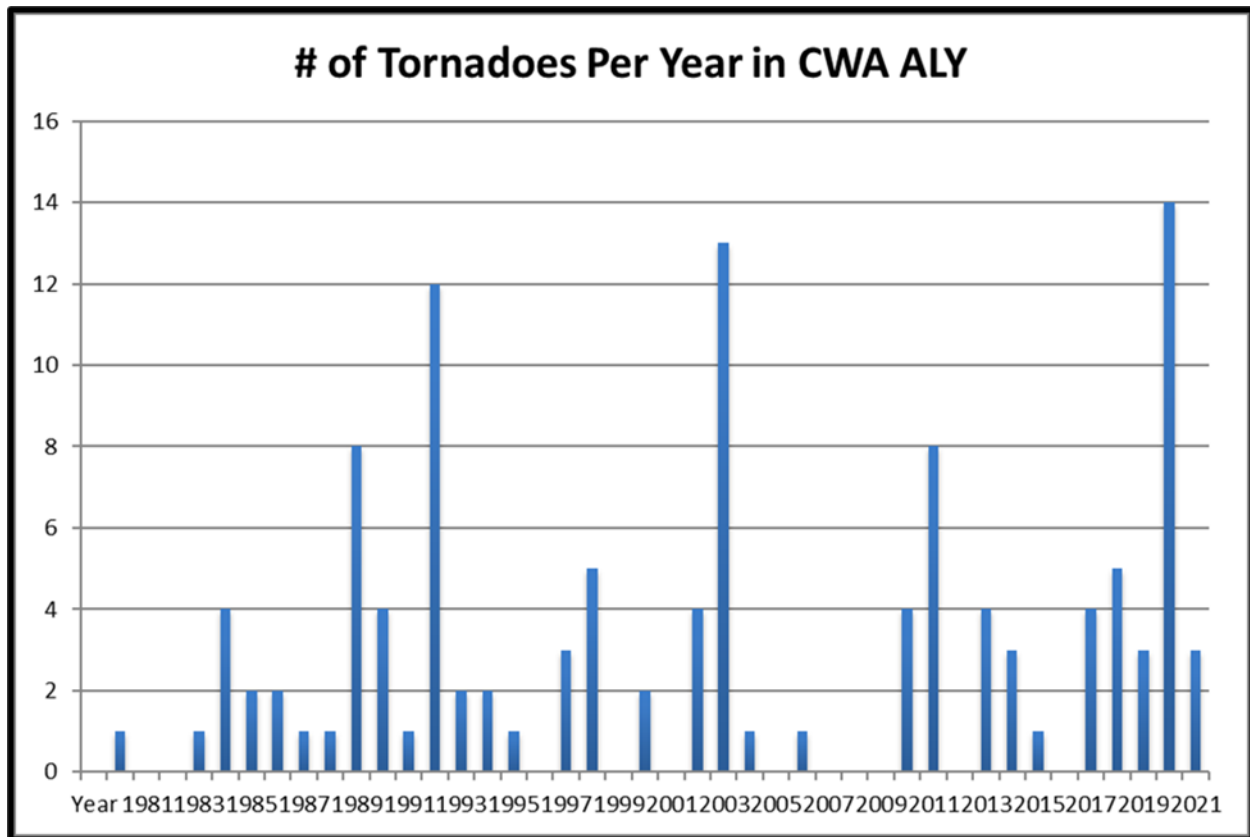
The Albany forecast area averages about three tornado events each year based on a tornado climatology mean period from 1950-2021. An analysis since 1980 shows that the 3 greatest seasons annually in the Albany County Warning Area (CWA) occurred in 1992, 2003 and 2020 (Fig. 1 on page 6). In the past, multiple reports of the same tornado are entered separately in *Storm Data* which can cause a higher number (i.e. 2003) of total reports. The 2020 record breaking season consisted of all separate tornadoes (14). The peak month(s) for tornadoes

- Tom Wasula, Lead Meteorologist

Continued on Page 6

since 1980 across eastern NY and western New England are usually in May and July (31 each), but August is steadily catching up with 3 in 2019 and 11 touchdowns in 2020 with a total of 25 since 1980 (Fig. 2 on page 7). The majority of the tornadoes in the NWS at Albany forecast area are EF-0 or EF-1 (~88%) since 1980 (Fig. 3 on page 7). The operational Enhanced Fujita Scale is a set of wind estimates based on degree of damage. This tornadic damage scale was modified from the old Fujita Scale by a team of meteorologists and engineers, and was implemented on February 1, 2007.

The EF scale ranges from 0 to 5, and has estimated 3-second wind gust ranges in miles per hour (mph). An EF-0 has winds of 65-85 mph, and an EF-1 has winds of 86-110 mph. An EF-2 has estimated 3-second wind gusts of 111-135 mph. Estimates of the damaging gusts are based on the subjective judgment of the survey team on 8 levels of damage to 28 structural and vegetative indicators. More information on the EF Scale, and the transition from the old Fujita Scale, can be found at the following website: <https://www.spc.noaa.gov/efscale/>.



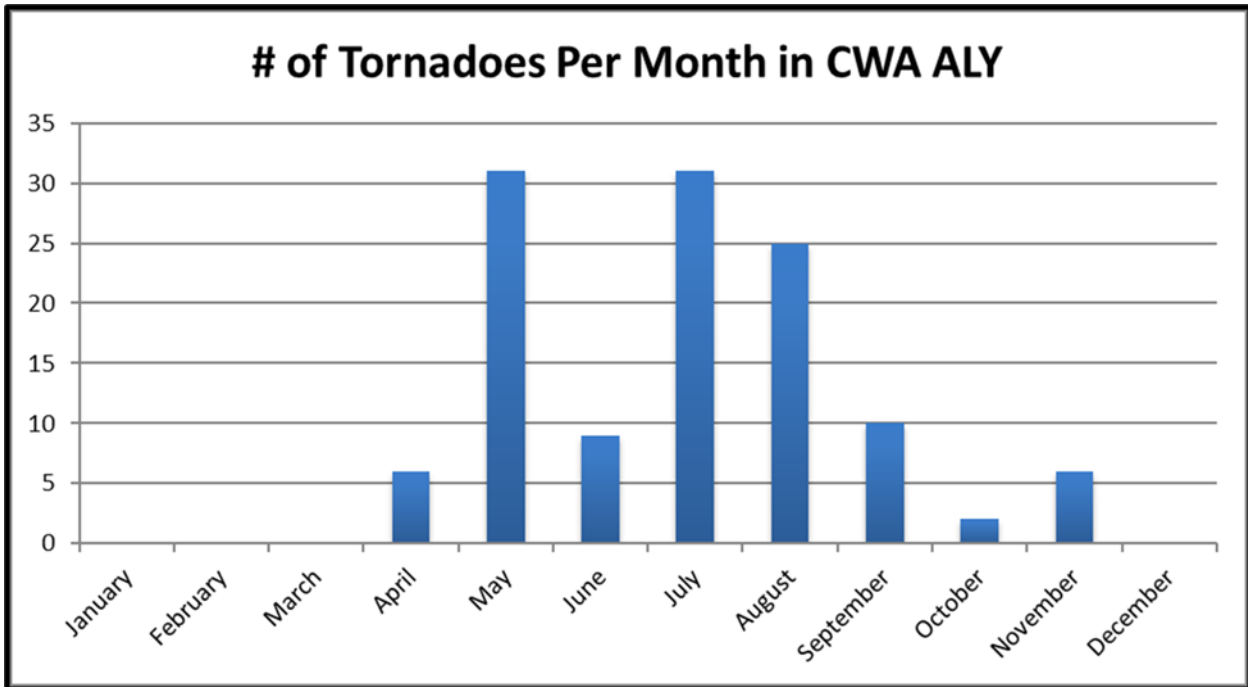
**Figure 1:** The number of tornadoes per year from 1980 to December 2021 in the NWS at Albany County Warning Area (CWA). A total of 120 tornadoes have occurred.

Overall, the 2021 tornado season was an average one across eastern NY and western New England. Three tornadoes occurred with 1 EF-0 and 2 EF-1s. It was unusual that none occurred between May 1<sup>st</sup> and August 31<sup>st</sup>. In 2020, a total of 13 tornadoes occurred with 6 EF-0's and 7 EF-1's from May to August 2020. The record-breaking 14<sup>th</sup> occurred with the October 7<sup>th</sup> derecho. Time will tell if the Albany County Warning area has an above, average or below normal season. So far up to mid-May 2022, no tornadoes have occurred yet.

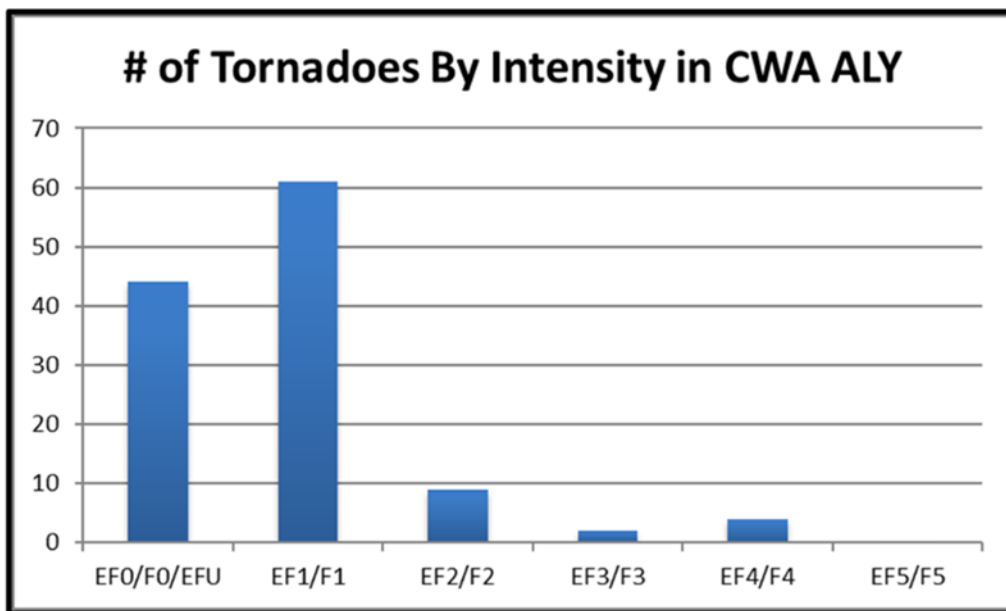


- Tom Wasula, Lead Meteorologist

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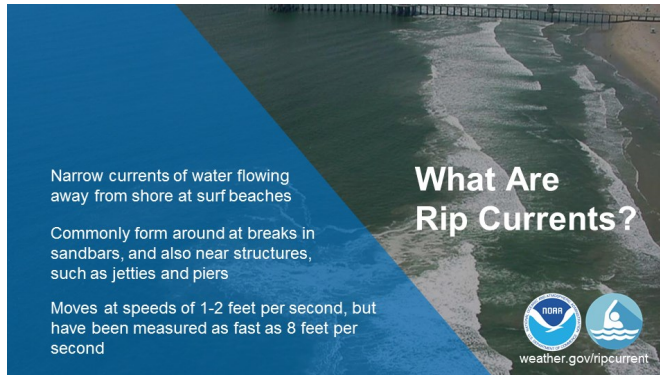
**Figure 2:** The number of tornadoes by month from 1980 to December 2021 in the CWA of the NWS at Albany which is across eastern NY and western New England. A total of 120 tornadoes have occurred with maxima's in the late spring and summer. May and July have the most tornadoes, though a steady increase has occurred in August the past few years.



**Figure 3:** The # of tornadoes by intensity from 1980 to December 2021 in the CWA at Albany. 104 of 120 tornadoes are EF-0 (65-85 mph) or EF-1 (86-110 mph).

## Rip Currents & Safety

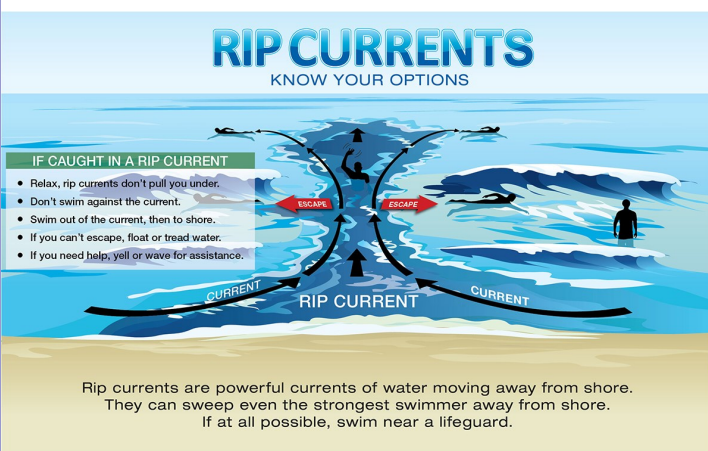
If you plan on visiting the ocean you need to be aware of the danger of rip currents. You need to know before you enter the water what rip currents are, and how to escape them. Rip currents are channelized currents of water flowing away from shore at surf beaches. Just because the weather seems perfect for the beach it does not always mean it's safe to swim or even play in the shallow waters. Rip currents often form on calm, sunny days. Every year, over 100 people die from rip currents in the United States.



Swimming in a pool is not the same as swimming at a surf beach with crashing waves, winds, and dangerous currents. Changing ocean currents and winds can quickly exhaust your energy and strength. A person standing waist deep in water can be dragged out into deeper waters, where they can drown.

Know before you go! Before you leave for the beach check the official National Weather Service surf zone forecasts; they will inform you of the rip current risk.

- **Low Risk:** Wind and/or wave conditions are not expected to support the development of rip currents; however, rip currents can sometimes occur, especially in the vicinity of groins, jetties, and piers. Know how to swim and heed the advice of lifeguards.
- **Moderate Risk:** Wind and/or wave conditions support stronger or more frequent rip currents. Only experienced surf swimmers should enter the water.
- **High Risk:** Wind and/or wave conditions support dangerous rip currents. Rip currents are life-threatening to anyone entering the surf.



According to the United States Lifesaving Association, USLA, many drownings involve single swimmers. When you swim with a buddy, if one of you has a problem, the other may be able to help, which includes signaling for assistance from others. At least have someone onshore watching you so if an emergency does happen they can call for help. The chances of drowning at a beach with lifeguards are 1 in 18 million.

Break The Grip of the Rip! Trying to swim against a rip current will only use up your energy; energy you need to survive and escape the rip current. Rip currents do not pull you under, so don't try to swim directly to shore. Swim parallel to the shore until you escape the current's pull and once you do so, only then swim at an angle from the current toward the shore. If you feel you can't reach shore, relax, face the shore, and draw attention

to yourself by waving your arms and yelling for help. Remember: If in doubt, don't go out!

Links & Resources: [Rip Current Science](#), [Rip Current Safety](#), [NWS Jet Stream Education](#)

- Ingrid Amberger, Lead Meteorologist



Word Search

# Severe Weather

I Y C S L F W I D C D L S E U  
L A K Y I J W T N C I U H G S  
C O M A G A I H R U N Z E U C  
M J T S H F N U K M S J L S A  
F M F T T L D N W U T F F T O  
U I X W N A S D W L A R C F T  
N C C F I S H E A O B V L R O  
N R H N N H E R L N I N O O R  
E O O Q G F A S L I L J U N N  
L B O G Y L R T C M I C D T A  
C U K L N O Q O L B T A C A D  
L R E M N O U R O U Y J O H O  
O S C T R D M M U S P Y Z A O  
U T H O F M F B D Y Y J E I K  
D D O M A C R O B U R S T L R

Thunderstorm

Shelf Cloud

Wall Cloud

Gust Front

Cumulonimbus

Macroburst

Hook Echo

Lightning

Instability

Flash Flood

Tornado

Hail

Funnel Cloud

Microburst

Wind Shear



Word Scramble

# Clouds

- TRASTUS \_\_\_\_\_
- AMSTAMUM \_\_\_\_\_
- WLLA CUDLO \_\_\_\_\_
- VNALI \_\_\_\_\_
- NELNUF LOCUD \_\_\_\_\_
- UUCSLUM \_\_\_\_\_
- ARIBUSSONTMT \_\_\_\_\_
- RUCSRI \_\_\_\_\_
- TEINALCURL ULDOC \_\_\_\_\_
- BNLSIUMMOUCU \_\_\_\_\_



Word Search Answer Key

# Severe Weather

I	Y	C	S	L	F	W	I	D	C	D	L	S	E	U
L	A	K	Y	I	J	W	T	N	C	I	U	H	G	S
C	O	M	A	G	A	I	H	R	U	N	Z	E	U	C
M	J	T	S	H	F	N	U	K	M	S	J	L	S	A
F	M	F	T	T	L	D	N	W	U	T	F	F	T	O
U	I	X	W	N	A	S	D	W	L	A	R	C	F	T
N	C	C	F	I	S	H	E	A	O	B	V	L	R	O
N	R	H	N	N	H	E	R	L	N	I	N	O	R	O
E	O	O	Q	G	F	A	S	L	I	L	J	U	N	N
L	B	O	G	Y	L	R	T	C	M	I	C	D	T	A
C	U	K	L	N	O	Q	O	L	B	T	A	C	A	D
L	R	E	M	N	O	U	R	O	U	Y	J	O	H	O
O	S	C	T	R	D	M	M	U	S	P	Y	Z	A	O
U	T	H	O	F	M	F	B	D	Y	Y	J	E	I	K
D	D	O	M	A	C	R	O	B	U	R	S	T	L	R

Thunderstorm

Cumulonimbus

Instability

Funnel Cloud

Shelf Cloud

Macroburst

Flash Flood

Microburst

Wall Cloud

Hook Echo

Tornado

Wind Shear

Gust Front

Lightning

Hail



Word Scramble Answer Key

Clouds

- |                  |                         |
|------------------|-------------------------|
| TRASTUS          | <u>STRATUS</u>          |
| AMSTAMUM         | <u>MAMMATUS</u>         |
| WLLA CUDLO       | <u>WALL CLOUD</u>       |
| VNALI            | <u>ANVIL</u>            |
| NELNUF LOCUD     | <u>FUNNEL CLOUD</u>     |
| UUCSLUM          | <u>CUMULUS</u>          |
| ARIBUSSONTMT     | <u>NIMBOSTRATUS</u>     |
| RUCSRI           | <u>CIRBUS</u>           |
| TEINALCURL ULDOC | <u>LENTICULAR CLOUD</u> |
| BNLSIUMMOUCU     | <u>CUMULONIMBUS</u>     |

- Thomas Wasula, Lead Meteorologist

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