NORTHEASTERN

STORMBUSTER

A Newsletter for Emergency Managers & Storm Spotters

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AN ANALYSIS OF THE BLIZZARD OF 1996

Michael F. Padovani, Meteorologist, NWS Albany

A powerful winter blizzard has similarities to an autumn tropical hurricane. Both have minimum wind speed thresholds that are significantly higher than typical winds. Both can make travel difficult, if not impossible. And both can cause extensive damage, even death. Officially, a blizzard is defined by the National Weather Service as winds in excess of 35 mph combined with falling or blowing snow dropping the visibility to less than a quarter of a mile, with these combined effects lasting at least 3 hours. Most blizzards in the United States far exceed these minimum requirements, and many of these snowstorms, especially the most infamous among them, occur along the Northeast coastal region of the United States. One in particular stands out…the great blizzard of January 1996.

The "Blizzard of '96", as it is now commonly referred to, affected areas from the Carolinas up through southern Maine from January 6th through the 8th. Around this period, there were many large undulations in the upper-level jet stream. These waves translated into surface low pressure systems manifesting themselves into potentially giant storms. In the case of the Blizzard of '96, a large pool of cold air near the surface was in place several days before the blizzard hit. And there was abundant moisture in the atmosphere available for precipitation, originating from the Gulf of Mexico during the early part of the storm, and, later, from off the warm waters of the Atlantic Gulf Stream. The evolution of the storm was quite complex, with several low pressure centers forming, diminishing and reforming. Three distinct low pressure centers could be found on the 12Z (7 a.m.) surface analysis on the 7th (**See maps**). The Blizzard of '96 was a classic example of a Northeast-style snowstorm… one that developed on the fringes of the Gulf of Mexico, and traveled northeast up the Atlantic seaboard.

At 12Z on Saturday the 6th, the surface analysis showed a 1015 mb (29.97 in.) low pressure system over southern Louisiana. An inverted low pressure trough, or boundary, extended from this low northeastward to West Virginia. Also, a warm front was forming, separating modified air over the warm marine waters of the Gulf of Mexico from much cooler continental air over the Gulf coast. Meanwhile, farther north, high pressure was dominating most of the U.S., with a strong high pressure system over the northern prairie, and another over northern New York. This resulted in extreme cold, with most of the northern part of the country below 0º Fahrenheit. A –30°F low temperature was recorded in Minnesota, with a –17°F low here at Albany. Also, it is important to note that the barometric pressure lines, or isobars, formed a slight 'dip' down the eastern Appalachians, pointing to cold air being 'dammed' up against the mountains. Locally, temperatures were in the teens below zero in the Hudson Valley. Just 12 hours earlier, the 00Z upper air atmospheric profiles from OKX (Upton, Long Island, NY) and ALB (Albany) showed just how cold this air was, but also that, comparatively, ALB was especially dry close to the surface. It's a subtle difference between the two stations, but, in the end, when the storm started affecting the Mid-Atlantic states 36 hours later, it wound up making a big difference in terms of snow amounts.

By Sunday at 12Z on the 7th, three distinct low pressure centers had formed. One of the new lows formed along the coastal front, just east of the Virginia/North Carolina border. Meanwhile, the high over Minnesota weakened slightly and drifted south. The high pressure and cold air over the Northeast held its ground. The next 12 hours would be critical to the storm's strengthening and development.

By 00Z on the 8th, the three surface lows had all merged into one primary low pressure center just off the Virginia coast. The central pressure of 990 mb (29.23 in.) was a drop of 14 mb (.41 in.) over the previous 12 hours. The high, now centered over Oklahoma, continued its southward drift, and the other high held strong at 1027 mb (30.33 in.), just north of the New York/Canada border. By this time, heavy snow and blizzard-like conditions were evident throughout much of the Northeast.

Another thing that makes this storm so interesting is that there was almost no snow north of Albany, yet areas of Long Island received over 20 inches. Compare the soundings of 00Z on the 8th from ALB and OKX, and therein lies much of the explanation. First, both showed tremendous warm air advection (WAA) profiles with very noticeable warming at the mid-levels when compared with the 48 hours previous. In addition, both profiles were entirely below freezing. A closer look at both of the soundings showed that they were also total opposites in terms of their humidity profiles. OKX had a fully saturated layer from the surface up to about 500 mb (~ 17,000 feet), then dried out, while ALB was dry throughout the same layer, and then was saturated from there up to 40,000 feet. The surface winds at OKX were out of the northeast, while, at ALB, they were out of the north, this being a significant enough difference to result in cold air 'damming'. Very stable cold, dry surface air was held in place over Albany by high pressure parked to the north, and a resultant advection of cold northerly winds. With the WAA saturating only the mid to upper layers of the atmosphere, Albany was spared from receiving significant snow. OKX, on the other hand, with its extremely deep, saturated layer right off the surface, received much more. Anyone who lives on Long Island knows that northeasterly flows are always moist.

By Monday, 12Z on the 8th, snow continued over much of the Mid-Atlantic and southern New England, with the central low pressure now down to its storm-lowest level of 980 mb (28.94 in.). 'Backlash' precipitation, caused by the trapping of overrunning warm air aloft, was starting to develop, adding even more to the snowfall. Temperatures remained in the teens and 20s over southern New England, with strong gusty winds. By the evening of the 8th, the snow had come to an end across most of eastern New England.

At 12Z on the 7th, the upper-level portion of the low pressure strengthened, enhancing the snow and wind even more. The low had become cut off, and was slowing the whole system down, thus making the storm more even potent, and adding still more snow to the equation. At 00Z on the 8th, the 500 mb level upper low was continuing to strengthen. Finally, by 00Z on the 9th, a 500 mb level trough caught up with the 850 mb level and surface lows, indicating the storm was becoming vertically 'stacked', allowing for more deepening of the system, with the trough becoming tilted back toward the northwest (negatively). The storm had reached its lowest pressure just hours before this point.

Very strong jet stream winds accompanied the Blizzard of '96. At 00Z on the 7th, an upper-level wind maximum of 110 knots was catching up with the then positively-tilted (toward the northeast) trough over the central U.S. At the same time, a very strong upper-level jet-stream wind maximum of 157 knots was moving off the Carolinas coast. But 36 hours later, at 12Z on the 8th, when the storm was at its lowest central pressure, a jet maximum wind of at least 135 knots was embedded on the lee (east) side of the trough. These winds ensured that this blizzard had good upper-level support to produce big snows.

Once all the elements of the historic Blizzard of '96 are understood, it is clear to see why storms of this magnitude occur with relative infrequence. Many factors worked together to produce massive and record-breaking snows. Everything seemed to jell for this to wind up as one of the most memorable of all snowstorms.

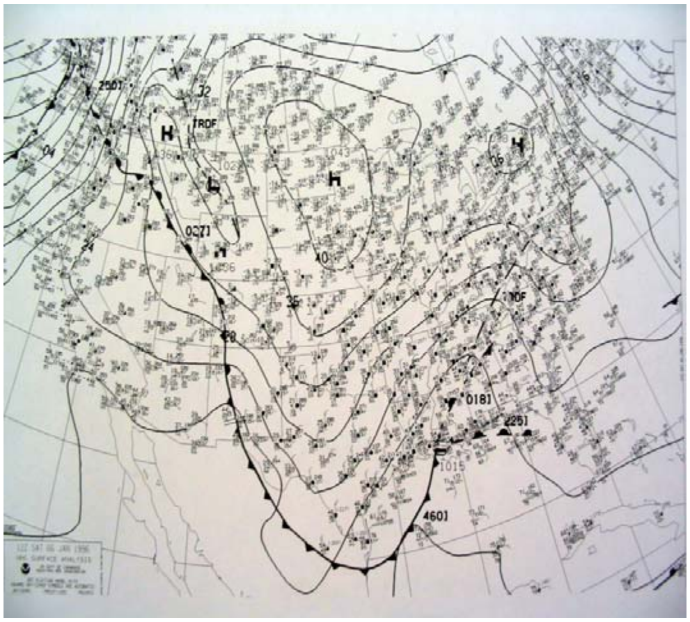
This storm had strong dynamics. Upper-level jets of over 150 knots energized the system, enhancing snow amounts in major urban corridors by utilizing two moisture-rich sources during the storm's development. Very cold air ensured an all-snow event for the Northeast, and not a mixed precipitation event, although Albany received only an inch or so of snow. Hence, the cold air damming certainly affected whether a location received no snow, a little snow or a lot of snow. Frontogenesis also played a key role in this storm's development. There was a sharp contrast in temperature between the air over the warmer Gulf Stream waters of the Atlantic, and the colder, entrenched air over the adjacent land. With the warm air overrunning the colder air, big snowfalls from Virginia to Boston resulted. The difference in the atmospheric profiles between Albany and Long Island explains the big contrast in snowfall locally. The air at the lower levels was so dry at Albany that most of the falling snow evaporated before it could reach the ground. Over Long Island, however, the surface air was moist, and hence, snow was reaching the surface during most of the event.

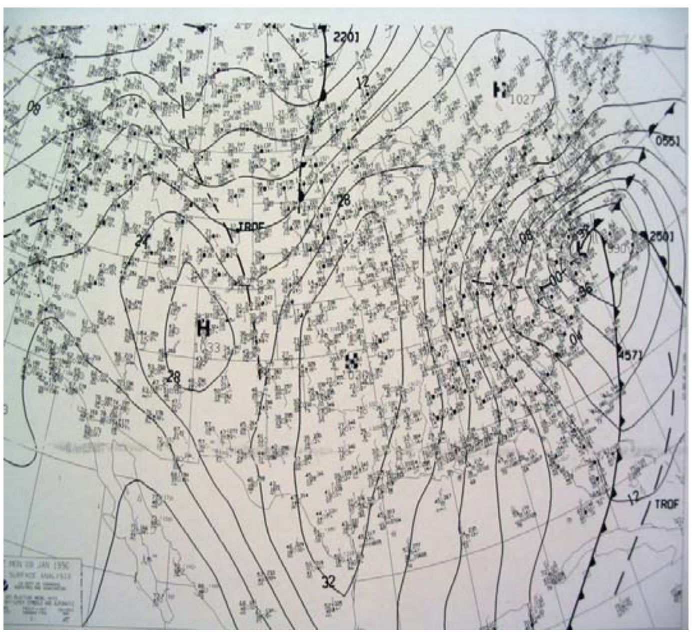
This storm had two more guns in its arsenal-it moved slowly, and topography enhanced the snowfall. Closed upper lows early on limited the storm's forward progression, and this further enhanced snowfall amounts. Higher elevations received even more snow due to the orographic effects of air lifting over mountainous terrain. Strong easterly winds and further coastal development of the system provided plenty of moisture to be "wrung out" over the high terrain. This translated into snow depths of up to 4 feet in spots! A strong Atlantic block pattern stalled the already slow-departing storm off the coast of Long Island, and allowed additional time for snow accumulations.

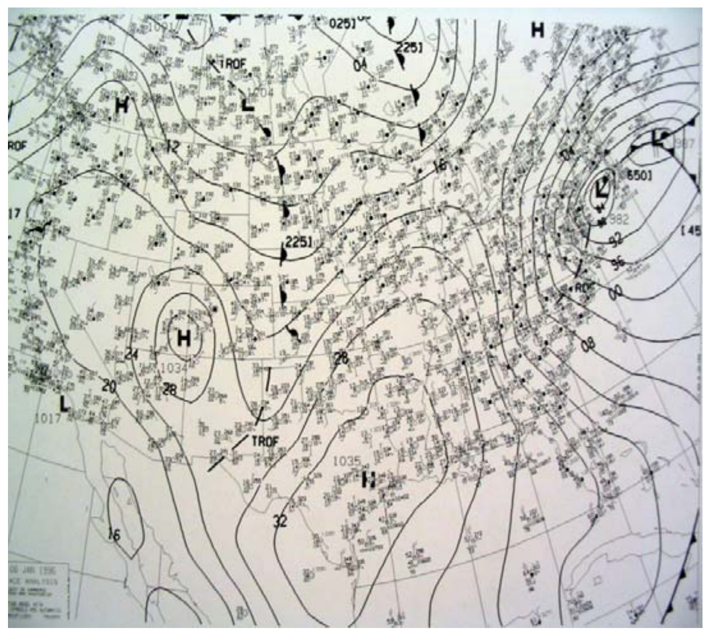
Snow totals varied greatly. South Carolina received 2 to 12 inches of snow, along with some sleet and freezing rain. Raleigh, North Carolina received around 4" of a snow/sleet mix. In Virginia, snow amounts were as high as 40", with many areas well over a foot. With this storm, Charleston, West Virginia experienced their second-highest snowfall total ever from a single storm, and their second-greatest snow depth ever. From the Ohio River to the central Appalachians, snow depths ranged from 2 to 4 feet.

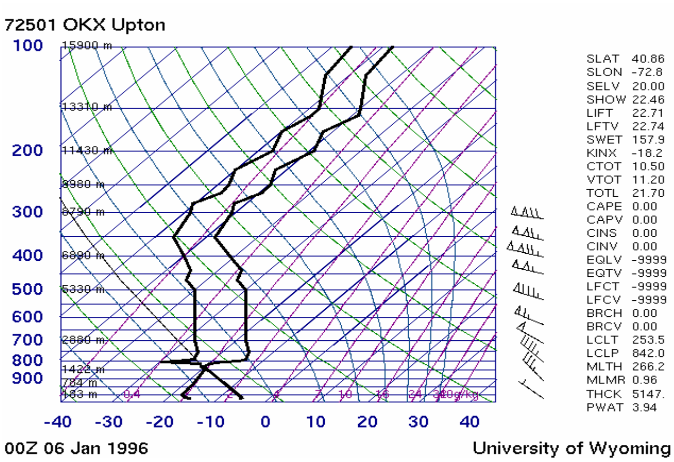
With this massive storm, records were shattered. Philadelphia and parts of New Jersey received their greatest single-storm snowfall totals ever. Philadelphia received 30.7" of snow, breaking the old record by 9.4". The all-time record for New Jersey, 34" at Cape May in 1899, was eclipsed by one inch at Whitehouse Station, in northeast Hunterdon County. Newark received 27.8", 5.2" more than the city's previous record, and 15.1" more than with the March 1993 "Storm of the Century". 20.2" was recorded in Central Park, New York, its third-greatest snowfall ever. Sharp contrasts were to be found in Columbia County, New York, with 23" at Ancram, but yet just 2" at nearby Valatie. Scranton, Pennsylvania recorded 21", while Binghamton, New York received only a trace. There were many other records too numerous to mention, but this gives a good indication of the impact of this storm. The Blizzard of '96 shall go down as one of the greatest snowstorms ever to affect the east coast of the United States.

The following NMC Surface Maps are provided by
The U.S. Department Of Commerce, NOAA.
The OKX and ALB soundings are from: http://weather.uwyo.edu/upperair/sounding.html





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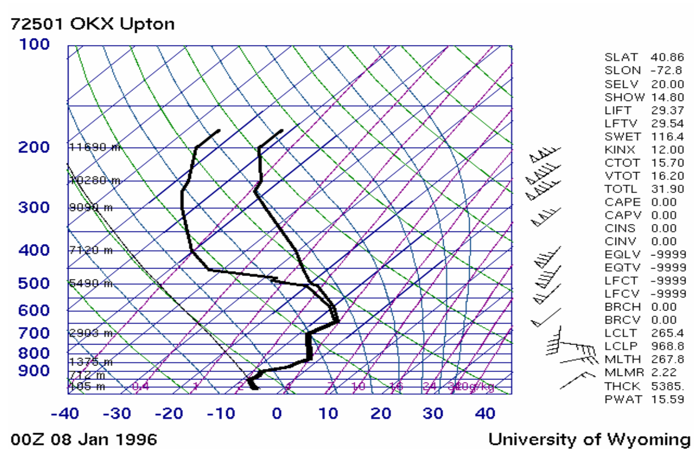
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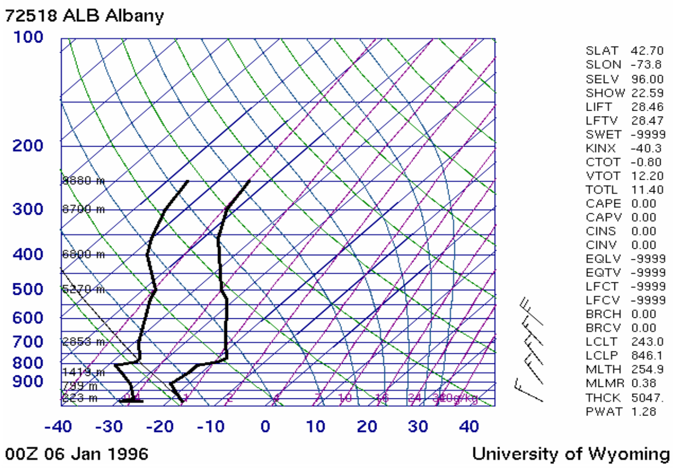

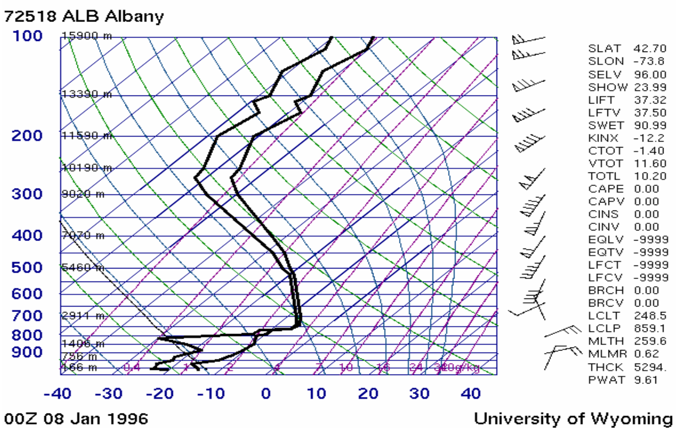

WINTER '04-'05: A LITTLE COLDER AND SNOWIER THAN THE NORM

Evan L. Heller, Climatologist, NWS Albany

Some of the highlights of the winter of 2004-05 included a severe cold outbreak in January, and a few significant snow events. The mean temperature for the season was 24.7º, just 0.4º below the normal mean of 25.1º. The mean high temperature was 33.0º, 0.8º below normal, while the mean low of 16.6º was 0.2º above normal. The snowfall for the season totaled 49.5", compared to the normal of 43.5", and precipitation totaled 8.58", which was just 0.84" above the normal 7.74" winter season total.

December kicked off the climatological winter season on a warm note. The high on the 1st was 52º, and readings see-sawed for the balance of the month, with some big extremes. There were no new daily temperature records. The warm reading for the month was 57º, on the 23rd, the cold reading, -5º, on the 20th. The high daily mean temperature was 46.0º, on the 1st, and the low mean was 3.5º, on the 20th. This was also the date of the low maximum temperature for the month, 19º. The high minimum temperature, 40º, occurred on the 1st. The mercury dipped to zero degrees or lower 3 days in December, and didn't climb above freezing during 9 days. The mean high temperature for December was 35.4º, 0.6º below normal, and the mean low was 20.2º, 0.1º above, resulting in a December mean of 27.8º, 0.2º below normal.

Due to the milder than usual temperatures, December was dominated by mostly rain events. The three most significant precipitation days were all-rain events. One of these events, on the 23rd, broke a 1929 record, with 0.85" recorded. This was also the greatest daily precipitation amount for the month, and the only new daily weather record of any kind for the month. The total precipitation for December was 2.93", and this was a scant 0.17" above normal. Precipitation fell during 20 days of the month, on 13 of which it was measurable. 0.10" or more fell on 7 of these days, 0.25" or more on 3 of those, and 0.50" or more on 2 of these.

The first significant snowfall for the month was 2.6", on the 6th, while the next event greater than an inch didn't occur again until right after Christmas Day, with a 2-day snowfall totaling 6.6". The vast majority of this, 5.6", fell on the 27th, to make it the greatest daily amount for the month, albeit not a record. The monthly snowfall total of 10.7" was 2.1" below normal.

January kicked off the New Year on a dry and mild note. Temperatures averaged 10 to 15 degrees above normal the first few days. But the warmest day didn't come until the middle of the month. A mean daily temperature of 44.5º on the 13th made this the warmest day in January. However, the warmest reading was on the 14th, when the mercury topped out at 57º. There were no new daily temperature records for warmth, but there were two such records for cold in January. On the 28th, the mercury plummeted for a second time to the month's low of 16º below zero. This broke the 1977 record for the date by just one degree. The other daily temperature record was a low maximum exactly a week earlier, on the 21st, when the mercury reached just 3º, shattering the previous record of 8º set in 1970. This was also the low maximum reading for the entire month. These were the only new daily temperature records for January. The high minimum temperature for the month was 37º, on the 3rd. The lowest daily mean temperature was -2.0º, and this occurred twice, on both of the daily temperature record dates. Temperatures were below normal for each of the last 17 days of the month. There were 9 days during which the temperature dipped below zero, and a whopping 18 days during which it didn't climb above freezing, 15 of which occurred during a deep-freeze stretching from the 15th to the 29th. The mean temperature for January of 19.5º was an impressive 2.7º below normal, placing it at #57 for coldest month of all time at Albany. The mean high for the month was 27.7º, 3.4º below normal, and the mean low was 11.4º, 1.9º below normal.

Precipitation for January, mostly in the form of snow, totaled 4.27", 1.56" above normal. The 14th had the most precipitation, 1.01", and this broke one of the longest-standing daily records at Albany. The previous record was 0.73", set way back in 1874, the first year of official National Weather Service Albany record-keeping. This was the only new daily precipitation record for the month. Precipitation fell during 18 days in January, on 16 of which it was measurable. 0.10" or more fell during 10 of those days, 0.25" or more during 5 of these, and a 0.50" or more during 4 of those.

Snowfall during January totaled 31.8" at Albany, 13.8" above normal. It snowed on 14 days, measurable on 12. There was one big snow event, when 11.5" fell from the 22nd to the 23rd. A few localities reported blizzard conditions, and, unfortunately, the combination of snow and cold claimed the life of an elderly woman in Litchfield County Connecticut, at the southeast corner of NWS Albany's County Warning Area. Minor snow events of consequence totaled 4. There were no new daily snow records, but the month wound up being Albany's 20th snowiest of all-time. It was also the city's 7th snowiest January.

February was a dry month. The 8th marked the thirteenth consecutive day with no measurable precipitation at Albany, just one day short of an official dry spell. The total precipitation for the month was just 1.38", 0.89" below normal. Despite how dry the month started off, there was precipitation on more days in February than even January…19. But it was measurable during only 10 of these days, and 0.10" or more fell during just 4 days, with 0.25" or more having fallen during 3 of these. The wettest day was the 21st, with 0.37", all in the form of snow.

Overall, the thermometer made a comeback in February, as the mean temperature for the month rebounded to 26.9º, 1.9º above normal. The high mean was 35.8º, 1.5º above normal, and the low mean was 18.1º, 2.4º above normal. The only daily weather record of any kind for the month was a high temperature of 48º on the 7th, which tied a 1951 record that is Albany's coolest maximum daily temperature record. This was not the warmest day of the month, though, as, on the 15th, the mercury reached 50º. The warmest day was the 15th, with a mean of 43.0º. The coldest days were the 1st and 19th, each with a mean of 16.0º. The lowest reading for the month was -1º, recorded on both the 1st and 2nd. The low maximum temperature for February was 25º, on the 24th, while the high minimum was 36º, on both the 8th and 15th. Temperatures stayed at or below freezing a total of 10 days. The last week of the month finished well below normal.

Snowfall for February totaled just 7.0". This was 5.7" below normal. Snow fell during 15 days of the month, on 11 of which it was measurable. The only significant snow day was the 21st, when 4.2" fell.

NWS FLASH FLOOD CRITERIA FOR WARNINGS AND VERIFICATION

Steve DiRienzo, Service Hydrologist, NWS Albany

The definition of 'flash flood': a short-term flood event (typically within 6 hours of the cause) that requires immediate action to protect lives and property, such as dangerous small stream, urban and ice jam flooding, and dam or levee failures.

The National Weather Service (NWS) utilizes The Flash Flood Monitoring and Prediction (FFMP) system, which is an integrated suite of multi-sensor applications that detects, analyzes and monitors precipitation, and generates short-term warning guidance for flash flooding, automatically. NWS staff exercise professional judgment in issuing and verifying flash flood warnings, keeping in mind the ultimate goal: to warn the public of rising water that will inundate an area to the degree it threatens life or property.

Flash Flood Warning (FFW) and Verification Criteria is as follows: Usually within 6 hours of onset of a causative event, such as heavy rain, a dam break, or ice jam release, or when one or more of the following occurs:

• River or stream flows out of banks and is a threat to life or property.

• Person or vehicle is swept away by flowing water from runoff that inundates adjacent grounds.

• A maintained road is closed by high water.

• Approximately six inches or more of water flowing over a road or bridge. This includes low water crossings in a heavy rain event that is more than localized (i.e., radar and observer reports indicate flooding in nearby locations), and poses a threat to life or property.

• Dam break or ice jam release causes dangerous out-of-bank stream flows, or inundates normally dry areas, creating a hazard to life or property.

• Any amount of water in contact with, flowing into, or causing damage of an above-ground residence or public building, and that is runoff from adjacent grounds.

• Three feet or more of ponded water that poses a threat to life or property.

Nuisance Flooding vs. Threat to Life or Property
Nuisance flooding would not meet the flash flood criteria outlined above and would not pose a threat to life or property. An Urban or Small Stream Advisory (FLS) would be issued in this case. Examples of nuisance flooding include:

• Urban/small stream flooding (conditions that do not pose a threat to life or property). For example: Roadside drainage ditches that fill during a summer thunderstorm. It should be stressed that children should never play in the water of storm water ditches or culverts, as the fast moving water could carry them away, and they could drown.

• Minor ponding of water during or after a heavy rain event or flood. Significant ponding may pose a threat to life and property. A 1988 United States Bureau of Reclamation (USBR) study indicates 3 feet or more as being a danger to people and vehicles.

• High stream levels that do not pose a threat to life or property. For example: Bank full rises on small creeks that fill during a summer thunderstorm. It should again be stressed that children should never play in creeks or streams during high water, as the fast-moving water poses a serious risk of drowning.

You should now have a better understanding of the flash flood warning process. If you have any questions, please contact me, Stephen.Dirienzo@noaa.gov. As always, please report flash flooding and any other severe weather to your nearest law enforcement agency.

HALOS, SUN DOGS AND SUN PILLARS

Thomas A. Wasula, Meteorologist, NWS Albany
and
Evan L. Heller, Meteorologist, NWS Albany

Optical phenomena involving the sun can be seen on any given day under the right atmospheric conditions. The rainbow is probably the most spectacular and familiar of these phenomena. However, three other types of interesting optical phenomena are encountered from time-to-time. These are halos, sun dogs and sun pillars.

Halos are quite commonly, but rarely noticed by the casual observer. A halo appears as a narrow white ring having a circle centered around the sun. Halos frequently occur on days when the sky is covered with a thin layer of high-level clouds. This particular phenomenon is best viewed in the early morning just after sunrise, or the late afternoon near dusk, when the sun is near the horizon. Halos occur more often at higher latitudes, where low sun angles and cirrus clouds are more common. Sometimes halos can be seen around the moon.

The two most common types of halos are the 22º and the 46º. The 22º halos are the most common, with the ring having a radius of 22º from the midpoint of the sun, as viewed by the observer. The halo is generated as a result of the dispersion of sunlight, much like a rainbow. Dispersion is the separation of colors by refraction (the bending of visible light). Ice crystals in the atmosphere are what refracts the light to create the halo, not water droplets, like for a rainbow. The cloud types most frequently associated with halos are common cirrus and cirrostratus. These clouds typically occur in association with fronts and cyclonic storms. Therefore, halos around the sun or moon tend to be at least indirectly associated with foul, or unsettled, weather.

There are four basic types of ice crystals that help form halos: plates; columns; bullets, and; capped columns. These crystals are all hexagonal, or six-sided, and therefore similar to snowflakes. The randomness of these ice crystals within the clouds is what is needed to form the halos. With this arrangement, the sunlight strikes the surfaces of the different crystals at varying angles, and the dispersed light is therefore scattered at varying angles and intensities. But with the sun being at virtually the same angle from the perspective of all of the ice crystals, the randomness of the refracted light is more "focused", with a large portion of the scattered light favoring refraction in one direction over another. As an example, with a six-sided ice crystal, the angle of <u>maximum</u> scattering will be 22º for producing the 22º halo. What decides whether a halo is a 22º or a 46º halo is the ice crystal type, structure and orientation within the clouds, and the path that the visible light takes through these ice crystals. The radius of a 46º halo is 24 degrees greater than the radius of a 22º halo. Therefore, a 46º halo is 48 degrees wider (the radius difference on both sides of the sun) than a 22º halo. Halos are usually whitish in color. The white color is what's usually produced by ice crystals, due to their imperfect size and shape, and thus their imperfect light refracting. Rain droplets, being purer in size and shape, act as prisms, producing a rainbow, with its various colors.

Sun dogs are a beautiful sub-phenomenon accompanying some 22º halos. A sun dog consists of two brighter spots of light, sometimes called 'mock suns', that are situated on the halo ring on either side of the sun, exactly opposite one another, and at the same exact distance above the horizon. Another name for sun dogs is 'parhelia'. Like halos themselves, sun dogs also are produced by the dispersion of sunlight by the ice crystals of cirrus clouds. The formation of the sun dogs within halos relies on the ice crystals being numerous and vertically oriented. These ice crystals need to be descending slowly, thereby increasing, very slightly, the <u>apparent</u> angle of their refraction of the sun's light rays at any given moment during the event, to make the sun dogs appear to be slightly greater than 22º from the sun. The ideal set-up for sun dogs is to have the sun be low on the horizon, so that the impact angle of the sun's rays is perpendicular to the vertical crystal faces within the clouds.

The sun pillar is yet another optical phenomenon related to the halo. Sun pillars are vertical columns of light seen typically near sunrise or sunset, appearing to extend directly upward from the sun. These brilliant pillars of light are produced when sunlight is reflected from ice crystals in the form of falling plates and capped columns. These two ice crystal types are oriented vertically. The pillars are usually reddish in color, since direct sunlight is often of this color when the sun is low on the horizon. Sometimes, pillars can also be seen extending below the sun.

The pictures that follow are of a halo with sun dogs, and a sun pillar. So to witness something different, be on the lookout for these optical phenomena in the future. They can be seen in the Northeast from time to time.

Source: DOC, NOAA

SPRING 2005 SKYWARN SPOTTER TRAINING SESSIONS

DATE	TIME	COUNTY	LOCATION
4/12/05	700-900 PM	ULSTER COUNTY	KINGSTON, NY
	HOSE #5 FIRE HOUSE AT 830 ULSTER AVE.		
4/13/05	630-830 PM	HERKIMER COUNTY	HERKIMER, NY
	911 CENTER AT HERKIMER COUNTY COMMUNITY COLLEGE		
4/14/05	630-830 PM	LITCHFIELD COUNTY	TORRINGTON, CT
	TORRINGTON CITY HALL AT 140 MAIN ST. 2ND FLOOR AUDITORIUM		
4/18/05	700-900 PM	COLUMBIA COUNTY	GREENPORT, NY
	COLUMBIA GREENE COMMUNITY COLLEGE AT 4400 SR 23 ROOM 206 IN THE MAIN BUILDING		
4/19/05	700-900 PM	WASHINGTON COUNTY	FORT EDWARD, NY
	OFFICE OF EMERGENCY SERVICES AT THE WASHINGTON COUNTY MUNICIPAL CENTER AT 383 BROADWAY BUILDING B IN THE BASEMENT IN TRAINING ROOM #2 ENTRANCE IS THROUGH THE FRONT ATRIUM		
4/27/05	700-900 PM	BENNINGTON COUNTY	BENNINGTON, VT
	BENNINGTON FREE LIBRARY AT 101 SILVER ST.		
4/28/05	700-900 PM	RENSSELAER COUNTY	AVERILL PARK, NY
	TOWN HALL AT 8428 MILLER HILL RD.		
4/30/05	1000-NOON	HAMILTON COUNTY	INDIAN LAKE, NY
	TOWN HALL ASSEMBLY ROOM ON PELON RD.		
5/3/05	700-900 PM	SCHOHARIE COUNTY	SCHOHARIE, NY
	PUBLIC SAFETY FACILITY AT 1 DEPOT LANE 2ND FLOOR EMO TRAINING RM		
5/10/05	630-830 PM	WINDHAM COUNTY	BRATTLEBORO, VT
	RESCUE INC. 541 CANAL ST.		
5/11/05	700-900 PM	ALBANY COUNTY	ALBANY, NY
	CESTM AT 251 FULLER RD. FIRST FLOOR AUDITORIUM		
5/12/05	700-900 PM	BERKSHIRE COUNTY	PITTSFIELD, MA
	BERKSHIRE COUNTY EMO AT 235 TYLER ST.		
5/14/05	1000-NOON	DUTCHESS COUNTY	EAST FISHKILL, NY
	EAST FISHKILL FIRE DISTRICT TRAINING BUILDING AT 2502 SR 52		
5/25/05	700-900 PM	FULTON COUNTY	JOHNSTOWN, NY
	FULTON COUNTY FIRE TRAINING CENTER AT 133 SUN VALLEY RD.		

PRE-REGISTRATION IS REQUIRED FOR ALL SKYWARN SPOTTER TRAINING SESSIONS. THE PREFERRED METHOD FOR REGISTRATION IS VIA THE INTERNET. GO TO: WWW.WEATHER.GOV,

CLICK ON ‘EASTERN NEW YORK’, AND LOOK FOR THE LINK TO SKYWARN SPOTTER TRAINING. IF YOU NEED TO REGISTER BY PHONE, PLEASE CALL 518-435-9580. YOU WILL THEN PRESS ‘7‘, FOR SKYWARN SPOTTER TRAINING. YOU’LL BE ASKED TO LEAVE YOUR NAME, A PHONE NUMBER, AND THE SESSION YOU ARE SIGNING UP FOR. NOTE: YOU MUST USE A TOUCH-TONE PHONE TO PRE-REGISTER. ONCE YOU HAVE DONE SO, YOU WILL NOT RECEIVE A CALL BACK UNLESS THE SESSION HAS BEEN CANCELLED, MOVED, OR IS FULL.

WCM Words

Ray O’Keefe
NWS Albany Warning Coordination Meteorologist

Please consider attending a Skywarn training session near you this Spring. The National Weather Service has invested billions of dollars in technology over the years. Doppler radar, satellites, and supercomputers are all critical tools in the severe weather warning process. However, we still rely on eyes and ears on the ground for warning and verification information. Indeed, we rely totally on spotter reports for severe weather verification. The class lasts about 2 ½ hours and certifies you as a Skywarn spotter. I hope you can attend a session.

From the Editor’s Desk

Plans are underway for our upcoming 10th anniversary edition of Northeastern StormBuster, scheduled for next winter. This special issue will feature the best articles from our first ten years. These will be editor’s choice, but we would like to base it on input from you, our readers. If you have a personal favorite which you would like to see in our special issue, please send us the title, and indicate which edition of StormBuster it is from. If possible, also include a copy of the article itself. Send your requests to: Raymond.Okeefe@noaa.gov. A special thanks goes out to NWS Albany’s John Quinlan for setting up the spring Skywarn session dates. We hope to see you at one of the meetings. We here at Northeastern StormBuster wish you a happy spring season.