



## ATLANTIC COAST OBSERVER NETWORK, MD / DE / DC CHAPTER WITH DATA FROM NEARBY AREAS

# PARALYZING SNOWS, PERSISTENT COLD COLDEST WINTER IN 25 YEARS

The last month of the winter of 2002-2003 will be remembered for its excessive precipitation, both frozen and liquid, and its persistent cold. The National Weather Service offices at Wilmington Delaware (ILG), Baltimore (BWI), and Dulles (IAD) each recorded its snowiest February on record. **Greg Keefer** of **Hagerstown 1E** broke its February snowfall record of 31.0" set in 1899. Temperatures were below normal for the first time since 1996 and the coldest since 1979. No extreme warmth or coldness was observed this month. **Rebecca Harvey** of **Eagle Rock** was the only observer to record a below zero reading. This was also the wettest February since 1979.

Temperatures for the first four days of the month averaged slightly above normal. Temperatures rose into the 50's to 60 in the southeastern portion and the 40's in the balance of the region except for the far western mountains where they were in the 30's to low 40's. **Floyd Abell** of **Hollywood** and **John Zyla** of **Ridge** both observed 60 degrees. More than half of stations reported their warmest temperatures of the month during this "warm" spell. A strong cold front preceded by rain and accompanied by strong winds moved across the region on the 4th. **Bobby Miller** of **Millers 4 NE** reported a peak wind gust of 60 MPH, a record for the month of February.

A storm, which moved in from the southwest the evening of the 6th, brought a fairly uniform snow cover to the entire region. Amounts were generally in the 6 to 7 inch range except for Western Maryland and along the Atlantic Coast where lesser amounts fell. **Dan Hanson** of **Millersville 1 SE** reported 7.5" while **Jeff Stoudt** of **Laurel 2 E** reported 7.4". Temperatures rose above freezing after the snows ended, allowing roads to clear.

Ideal radiation conditions, clear skies, light winds, and a good snow cover allowed temperatures to fall into the teens and single digits on the 8th and 9th.

Roughly half of the stations recorded their coldest temperatures of the month. **Al Kreinik** of **Parkton 5 SW** observed 4 degrees and **Greg Latta** of **Frostburg** and **Lynn Albright** of **Fallston 2 NW** both observed 5 degrees.

The 10th, 11th, and 12th saw a continuation of cold temperatures with some light snowfall. A reinforcing cold front moved through the region on the 12th. Single digit morning lows occurred on the 13th and 14th in portions of New Castle County Delaware, and in Maryland's Anne Arundel and Harford Counties.

A major storm brought heavy snow and sleet to a majority of the region from the 15th to the 18th. The storm as viewed through the eyes of ACON observers appear on pages 4 to 6 of this expanded report. One to two feet plus fell across all of the region except for St Marys County and along the Atlantic Coast and the extreme southern Eastern Shore. A strong cold high pressure system northeast of the region and moist air southwest of the region provided the ideal ingredients. The storm began on Saturday, February 15th. Two to three inches of snow fell early on the 15th. It was pushed south by a strong high pressure. The snows then moved very slowly northwards the night of the 15th/16th as cold air moved south and by sunrise covered the entire region. Temperatures fell to the low to mid teens and slowly rose to near 20 by midnight Sunday, February 16th. Sleet moved up from the south Sunday evening and covered most of the region by early Monday morning. As the storm moved north, the sleet changed back to snow. This storm shutdown the region. State of emergencies were declared by the states of Maryland and Delaware. Businesses not closed as a result of the President's Day Holiday on Monday closed. Airports closed due to the storm and did not resume near normal flights until Wednesday. Stranded returning passengers were very upset when they found their cars snowbound in unplowed airport parking lots. Schools remained closed for the balance of the week

### EXTREMES REPORTED BY ACON OBSERVERS

#### MAXIMUM TEMPERATURE

Harbeson, DE	63
Jug Bay Wetlands	63
UofD Res Ctr Georgetown	62

#### MINIMUM TEMPERATURE

Eagle Rock	-6
Parkton 5 SSW	4
Frostburg	5
Fallston 2 NW	5

#### WARMEST AVG. TEMP.

Ridge	35.1
Hollywood	34.0

#### COLDEST AVG. TEMP.

Eagle Rock	21.1
Frostburg	23.1

#### MAXIMUM PRECIPITATION

Eagle Rock	8.98
Glenmont	8.03
Forest Glen	8.02

#### MINIMUM PRECIPITATION

LaVale	4.85
Hagerstown 1E	5.15

#### MAXIMUM SNOW

Eagle Rock	81.5
Owings Mills	44.7

#### MINIMUM SNOW

Ridge	16.7
Hollywood	21.0

### MEMBER NEWS

**Kevin Shaw** of **Gaithersburg 2 WNW** was hospitalized for pneumonia and complications from the March 19th to the 24th.

**John Zyla** of **Ridge** Mother passed away on March 31st.

at many locations. Light snow returned Monday night and early Tuesday morning as an upper air disturbance dumped around an inch of fluffy snow. The City of Wilmington Delaware declared a state of emergency on Monday and Tuesday, the 17th & 18th, which forced businesses to close and curtailed public bus service in New Castle County Delaware. The weight of the snows collapsed roofs in the region. The B&O Museum Roundhouse in Baltimore lost part of its roof. Part of the roof of a 2 year old May B. Leasure elementary school in Bear Delaware collapsed. There were reports of other collapses and precautionary building evacuations as a result of snow on roofs. Deep snows on roofs blocked some gas heater vents resulting high carbon monoxide buildups in some homes and precautionary evacuations.

Under sunny, dry conditions the region slowly dug out. Afternoon temperatures were in the 30's and 40's while nighttime temperatures fell into the teens and 20's. This permitted a slow snow melt.

Rains moved into the region Friday night, February 21st and became heavy on Saturday, February 22nd. One inch amounts were common across the entire region with the heaviest rains of 2 to 3 inches falling in the Baltimore / Washington metropolitan areas northeastward into Northern Delaware. 3.49" was reported by **Dan Hanson of Millersville 1 SE**, 3.21" by **Rich Giannola of Laurel JHU/APL**, and 3.05" by **Jeff Stoudt of Laurel 2 E** This heavy rain along with existing snows on roofs from the President's weekend snowstorm collapsed more roofs, creating urban and small stream flooding and basement flooding.

The most notable roof collapse was the Toys R Us store in Lanham, Maryland.

Another snowstorm, maybe the final one of this long winter season, moved into the region on the 26th. During the last three days of February a general 4 to 5 inches fell. This storm did not live up to forecasts. The heaviest snows fell in the Washington metropolitan region and in St Marys County. **Floyd Abell of Hollywood** reported 7.2", **Brian Smith of Oxon Hill** 6.4", and **Stan Rossen of Glenmont** 6.3".

St Paul Street in Baltimore.

Photo credit "Baltimore Sun" February 21



## OBSERVER COMMENTS FOR FEBRUARY 2003

### **Gary Gallaher of Bear 2 SW, DE**

Cold, wet, snowy month. Coldest since 1979, wettest since 1971, and snowiest month ever. Old record snowiest month was January 1996 when 28.7" fell. 8 days with snowfall of =>1" a new record for any month. Old record was 6 days.

**21st** - Heavy rains on top of a 14" snow cover caused small stream, urban, and basement flooding. Thunder mid day.

**23rd** - Record February minimum barometric pressure of 29.08" . Old record was 29.17" set 2/4/95. (Period of records 1992-2003)

### **Nate Mullins of LaVale**

2nd snowiest month on record (since 1992) behind January 1996 when 41.0" fell.

**4th** -- Light overnight rains.

**21st** -- Heavy fog developed today with moderate rain this afternoon. Temperatures were right around freezing with a thin layer of ice.

**22nd** -- Rain heavy at times. Dense fog.

### **Dave Bryant of St Margarets**

**7th** -- Quite a bit of ice on rivers and the Bay the last three weeks.

**22nd** -- Heavy rains & thunder caused heavy snow melt.

### **Dan Hanson of Millersville 1 SE**

Snowiest month on record 36.6", (old 32.1 in 1/96), and the coldest February on record with an average temperature of 30.0 degrees (since 1/1/83). This was also the coldest winter on record on 30.2. Winter season snowfall 50.7".

### **Jeff Stoudt of Laurel 2 E**

**10th** -- Wet snow.

**22nd** -- Rain, heavy late AM with occasional thunder.

### **Al Kreinik of Parkton 5 SW**

Winter Stats: Avg max temp 37.0, Avg min temp 20.2, Avg temp 28.6. Precip 14.44", Snow 60.5"

Snowiest February on record in Parkton region, also the wettest since 1981 when 6.49" fell.

**4th** -- 53 mph wind gust, the strongest of the month.

**23rd—26th** -- Low temperatures leaves solid snow pack.

### **Marty Sharrow of Owings Mills 2 SE**

**10th** -- Occasional periods of mostly light snow.

**24th** -- Intervals of clouds, brief flurry, milder.

### **Joe Manfre of Baltimore 2SE**

**1st** -- Cloudy, cold, fog in early AM, light rain & drizzle.

**24th** -- Variable clouds, cold, snow & sleet shower.

**27th—28th** -- Late PM snow on the 27th (3.0") and early AM snow (1.5") on the 28th.

### **Herb Close of Manchester 1 SW**

Snowiest February on record with 37.9" (old 23.1" in '93) and wettest on record with 5.92" (old 5.34" in '98).

### **Ralph Hartsock of Westminster 4 SSE**

**12th** -- Zero visibility in snow squall.

**23rd** -- Fog, early rain showers to wet snow, windy, clearing late.

### **Greg Klein of Westminster 5 SSE**

**12th** -- Early morning squall of snow with strong west winds created ground blizzard conditions for a while.

# OBSERVER COMMENTS FOR FEBRUARY 2003

## **Bobby Miller of Millers 4 NE**

Winter Stats: Avg max temp 36.3 (-4.5), Avg min temp 21.8 (-3.4), Avg temp 29.1(-3.9). Precip 13.77", Snow 61.2".

Wettest, coldest, and snowiest February on record (since 1982)

**4th** -- New February record wind gust of 60 MPH. Many limbs and branches down. Heavy showers after sunrise.

**11th** -- Snow squall in late afternoon visibility down to 1/8th mile. 0.9" fell in 30 minutes, 1/2" fell in 45 minutes.

## **Manuel Farfan of Frederick 4 N**

**11th** -- Mostly cloudy day with some wet snow during 5-5:40 PM. Snow moderate to heavy at times and easily sticking to the ground.

**24th** -- Breezy day started cloudy then turned partly cloudy. Warm with a high of 44.

**25th** -- Very windy and cold day with the maximum temperature reported at 0000 hours.

## **Rich Giannola of JHU/APL OF Laurel**

**10th** -- SNSN-/SNSH in afternoon with large snowflakes 2:30-3:00PM, tapered to flurries and ended by 3:30 PM.

## **Rob Cohen of Potomac 4 N**

Snowiest month on record. Wettest February on record.

**9th** -- Tied daily record minimum temperature.

**22nd** -- Heavy rain, thunder at 11:30 AM. February record daily rainfall (2.03")

## **Rich Giannola of Olney**

Snowiest month records began in July 1986.

## **Stan Rossen of Glenmont 1 NNE**

Wettest February on record. Old record was 6.22" set in 1979. It was also the snowiest month on record. The old record was 33.7" set in February 1979.

## **Kevin Shaw of Gaithersburg 2 WNW**

An incredible month of numerous snows. My snowiest month on record surpassing the 35.0" in February 1979.

## **Joe Terry of Forest Glen**

Snowiest and 3rd wettest since station inception (1994). No temperature extremes; coldest occurred during snow events, otherwise rather mild.

**6th & 7th** -- Major snowstorm. Up to 3/4" per hour snowfall rate.

**4th** -- Highest wind gust since 1/13/00-- 40 MPH.

**22nd** -- Max & min relative humidity both 100%. Heavy rains and thunder today.

## **Bill Hudelson of South Bowie**

**1st** -- Overcast, drizzle, and light rain with moderate to dense for during the morning and afternoon.

**4th** -- Overcast with rain AM, broken - scattered PM peak wind gust 36 MPH from the West.

**27th - 28th** -- Snow began 1530 on the 27th and ended by 1000 on the 28th. Total 3.6" fell

## **Brian Smith of Oxon Hill**

**11th** -- 41 degrees today - First migratory robin.

## **Floyd Abell of Hollywood**

**4th** -- AM showers -- fair, breezy PM. 60 degrees today.

## **John Zyla of Ridge**

24 of 28 days with snow on the ground. St Marys County record for snow days has been broken! (according to my tabulations, which includes info from 5 stations in the county. It snowed at least a trace or more 34 days this season. (That breaks the old record of 30 recorded for the season on 1903-1904.)

## **Greg Keefer of Hagerstown 1 E**

This was the snowiest February on record with a total of 34.8" breaking the old record of 31.0" in 1899. This is the 2nd wettest February on record with 5.15" of precipitation. The wettest is 5.20" set in 1984.

**12th** -- Temperatures rose overnight to 36 ahead of a strong cold front. Then strong WNW winds blew in around 5 AM with gusts to 48 MPH and some snow showers. Colder and windy all day.

**19th** -- Warmer today high of 40. A good bit of snow felt today. Some light wet snow late this afternoon and early evening with large flakes but no accumulation.

## **Jim Vaughn of Smithsburg 2 NE**

Wettest, 5.78" (old record 5.07" in 1998), & snowiest 37.3" (old record 28.2" in 1983) February. Also the second snowiest month on record behind 42.6" in 1/96.

## **Robert Rickell of Hanover 2 S PA**

**10th** -- Fog & Sleet

**22nd** -- Fog and minor flooding on local streams.

**23rd** -- Rain ended as sleet and snow.



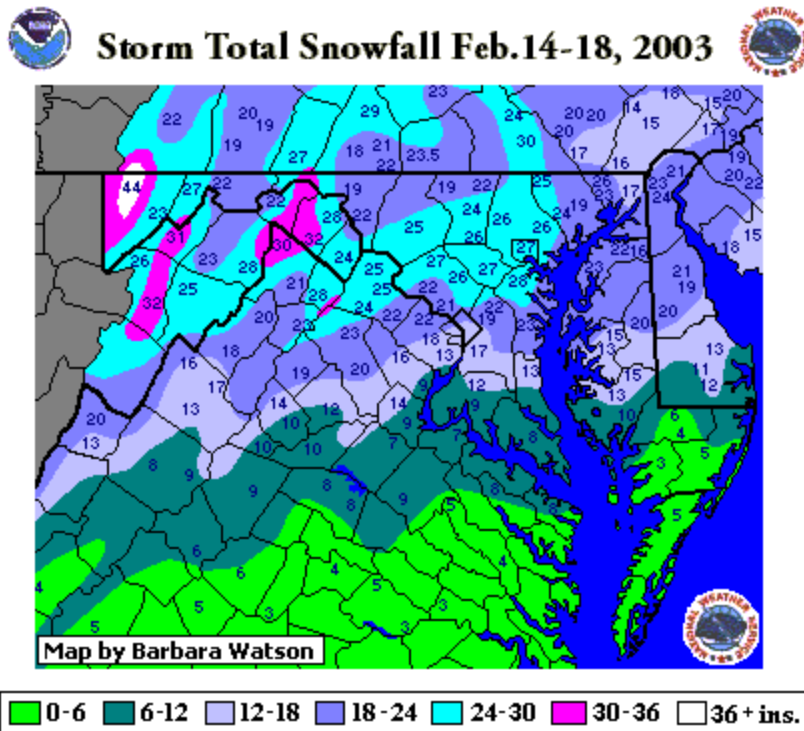
Fox Run Shopping Center, Bear DE February 18  
Photo from Gary Gallaher

Compiled by Gary Gallaher, MD/DE ACON Data Collector and Report Writer, from data received from dedicated observers. Without your observations each month this report will not be possible.

## SPECIAL REPORT ON THE PRESIDENT'S DAY SNOWSTORM AND HEAVY RAINS ON THE 22nd

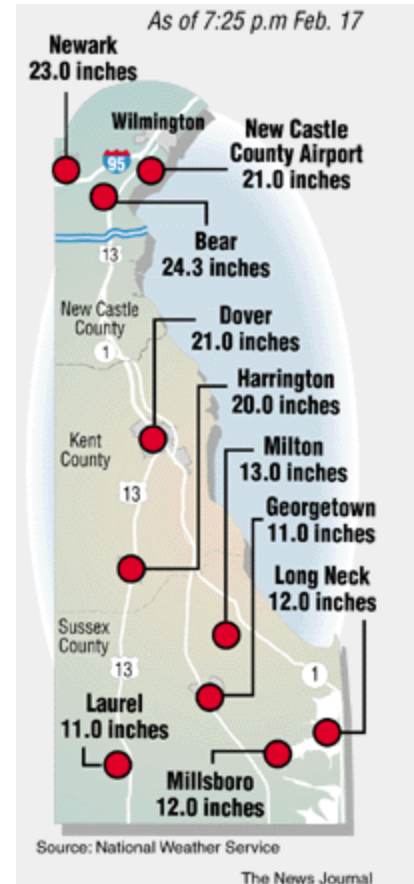
A paralyzing snowstorm hit the region over the President's Day Weekend, (15th-18th). The next weekend saw some heavy rains on top of the heavy snow cover. This report includes information which I gathered and more importantly the view from our ACON observers.

First lets look at some graphics the snowfall from the President's Day Weekend storm.



Map above from the National Weather Service Sterling site.

Map at the right from Wilmington Delaware's "The News Journal" February 18, 2003. Snowfall totals from public information statements issued by NWS Mt. Holly, NJ.



Now for some details and pictures from ACON Members and the local press.

**Gary Gallaher of Bear 2 SW DE: 16th** - This was the heaviest daily snow fall on record breaking the 20.7" which fell on 1/7/96. Snow began shortly after 6AM and became heavy shortly after 7 AM. The snow made a very slow movement northwards. Winds increased with time and peaked at 38 MPH shortly before midnight. Snow mixed with sleet around 11 PM.

**Nate Mullins of LaVale: 15th** -- Light to moderate snow overnight tapered to flurries by 8 AM. Snow continued to skirt just to the south of us most of the day. **16th** -- Steady snow overnight with 7" on the ground at 7 AM. Steady snow continued to pile up all day long. Snow was heavy at times this evening with rates at least better than an inch per hour.

**Dan Hanson of Millersville 1 SE:** 15th-18th - Massive four day snowstorm broke the previous snowstorm of 23.5" set 2/11/83.

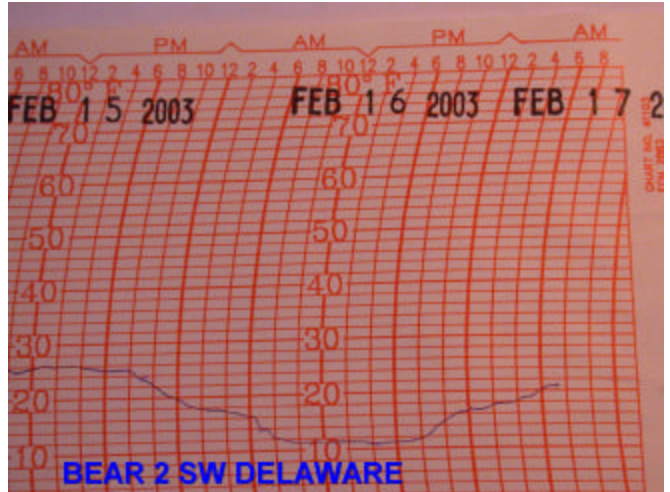
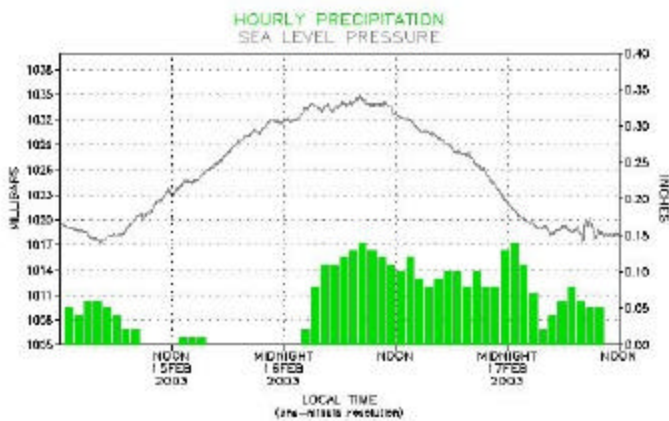
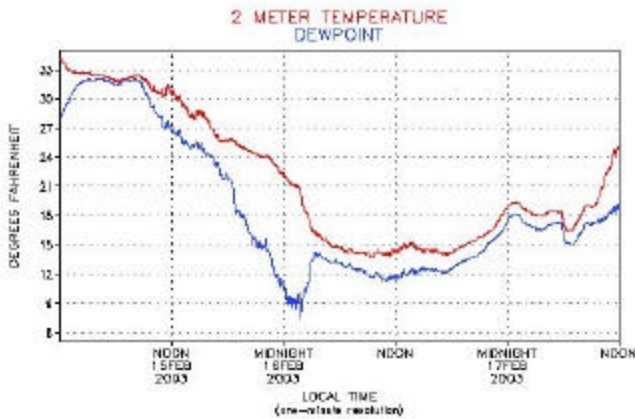
**Dave Bryant of St. Margarets: 16th** - Heavy snowstorm temperatures in teens, 20-25 knot winds, blowing / drifting snow.

**Jeff Stoudt of Laurel 2 E: 16th** - Heavy snow, thunder 0720 hours; sleet late evening.

**Al Kreinik of Parkton 5 SW:** 16th/17th - Heavy snow leaving 21" and 24" respectively on the ground, also blowing and drifting snow with glaze.

**Joe Manfre of Baltimore 2 SE:** 16th - Heavy snow, 20", and thunder 17th - Snow and sleet ending, 3.5".

Major Snowstorm of Feb 15–17, 2003



The above temperature chart from Gary Gallaher of Bear 2 SW DE shows the extreme cold temperatures during the storm.

The two charts on the left are from Joe Terry of Forest Glen. The top one is a plot of the temperature (in red) and the dew point (in blue). The lower chart is a graph of the barometric pressure (black) and hourly precipitation (green).

Lower left: Photo from David Roth of Montgomery Village 1 SW. Street in front of David's home.

Lower right; Photo from Nate Mullins of LaVale.



**Herb Close of Manchester 1 S: 16th** - Snowfall 18.5", liquid equivalent 1.61" (core sample from snowboard)

**Ralph Hartsock of Westminster 4 SSE: 16th** - Extremely heavy snow, blowing and drifting. Ralph reported that many greenhouses collapsed under the weight of the heavy snow. The Carrollton Mall closed for days as a result of thoughts the roof might cave in.

**Bobby Miller of Millers 4 NE: 16th** - Heavy snowstorm, visibility 1/4 mile or less from late morning till 10PM. New snows since last observation: 10AM 3.2", 1PM 6.3", 4PM 10.9". Dry, blowing and drifting. Higher moisture content in evening (6PM 16th to midnight) with 0.38" Precipitation and 3.5" snow. 17th - About 2 1/2 hours of snow/sleet mix 5 AM to 7:30 AM. Maximum depth of snow on ground of 23.5" at 5 AM. 22nd - Moderate to heavy rain. Small streams over banks. Rivers to bank full.

**Manuel Farfan of Frederick 4 N: 16th** - My first major big snow storm! Snow began falling around 3 AM leaving 15.5" of new snow on the ground by midnight. Snow, heavy at times with several hours of heavy snow falling at a rate of 1.5" per hour. Hard to avoid snow compacting when measuring but did my best by cleaning my board every 6 inches until 8 PM. Strong winds with blowing snow during the night made all my snow shoveling worthless: What a big day in my life!

**Rob Cohen of Potomac 4 N: 16th** - Snow all day changing to sleet by 9 PM. **22nd** - Heavy rains 2.03", thunder at 11:30 AM. Record February daily rainfall.

**Kevin Shaw of Gaithersburg 2 WNW: 16th** - Near blizzard with my third greatest ever daily snowfall total of 19.9". 2.83" core sample taken 4 AM on the 18th, prior to any melting, corroborating my water equivalents determined by numerous collecting and melting of my 4 inch gauge catch.

**Joe Terry of Forest Glen: 16th** - Snow began ~0130 hours. Heaviest snow of the day occurred before sunrise, 2+inches per hour. Frequent moderate snow with temperatures only in the mid-upper teens midday. Snow changed to sleet by 2130 hours.

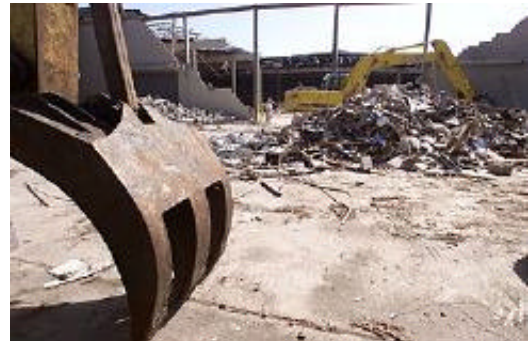
**Bill Hudelson of South Bowie: 16th** - Snow began 0300 hours, changing to sleet 2100 hours. Bill reported the following roof collapses as a result of the snowfall of the 16th/17th and or the heavy rains of the 22nd: Toys R Us, Lanham; a rental center in Odenton; a shopping center in Odenton; and Eckerd Drug Store in Waldorf. Also several boat storage facilities in Anne Arundel County—Edgewater specifically.

**Greg Keefer of Hagerstown 1 E: 16th** - Snow began over night around 2 AM with 4 new inches by 8 AM. Snow all day with very cold temperatures in the mid teens. Snow was steady and moderate all day heavy at times. By midnight 16 new inches had fallen. **17th** - Snow overnight with sleet mixed in. Sleet was heavy at times and compacted the snow amounts.

**Robert Rickell of Hanover 1 S PA: 16th / 17th** - Snow began falling here at 4:30 PM on the 16th, and continued heavily through the day, along with occasionally gusty winds which caused some drifting as well. Snow became mixed with sleet after 1 AM on the 17th, and this mix of snow and sleet fell until around 7 AM, when the precipitation changed back to a period of all snow before ending around 10 AM. Also, some fog and freezing drizzle fell at this location during the evening of the 17th. Nearly all roads were closed from noon the 16th thru noon on the 17th, as well as most businesses closed during the two day period.



**Left:** Toys R Us Lanham, MD. February 22 Photo credit AP.



**Right:** Dover AFB Cargo Facility Clean-up. Photo credit. "The News Journal", Wilmington DE



**Left:** Snowdrift covered with sand on the Rehoboth Beach boardwalk. Photo credit "The News Journal", Wilmington DE



**Right:** B&O Museum Baltimore Photo credit "Baltimore Sun" February 18.