

## **Major Nor'easter Friday Through Early Saturday Morning, March 16-17, 2007**

Winter came late in the 2006-07 season, but when it came it came hard with the transition to cold in mid January and the epic Valentine's day snow storm on February 14. And winter would not give it up in March with cold and stormy conditions dominating much of the first half of the month and this, the second major snow storm of the season, coming on Friday, March 16 through the early morning hours of St. Patrick's day, March 17.

This storm was much different than the Valentine's day system in that the low center was not as strong, nor was the upper level support that typically drives these types of coastal nor'easter storms. However, much like the Valentine's day storm this one was associated with a very rich supply of moisture and had plenty of cold air to work with to produce widespread heavy snow over eastern New York and western New England. With this storm, the axis of heaviest snow was shifted east of the zone of heaviest snow in the Valentine's day event which meant the western Catskills, Mohawk valley, and Adirondacks, which were hit so hard in February, received much lower amounts of snow during this event, generally a range of 6"-10". Because this storm was not able to develop to the extent that the Valentine's day storm did, its precipitation area was more elongated and stretched out along the jet stream, rather than heavily lobbed to the west, which is a sign of a strong surface circulation, and therefore produced a fairly narrow zone of heavy snow that stretched from northeast Pennsylvania, through the eastern Catskills, Hudson valley, and western New England where totals generally ranged from 12"-17". There was a small bull's eye that developed over the higher elevations of Greene county and throughout just about all of Columbia and northern Dutchess counties where 17"-24" of snow piled up. This bull's eye region was along and just to the north and west of the sleet line which developed shortly after midnight on the 17th. The sleet came up as far as Dutchess, eastern Ulster, southern Columbia, southern Berkshire, and Litchfield counties as some mid level warm air circulated into the region, acting to slightly cut snow totals by a few inches in those areas. The graphic illustrates the snowfall amounts and distribution for the March 16-17, 2007 major nor'easter.

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## Observed Snowfall Distribution Map for the March 16-17, 2007 Major Nor'easter

(This distribution map was created using WeatherNet 6 and National Weather Service Cooperative observer snowfall observations)



A small taste of spring preceded this storm with temperatures on the 14th surging into the mid 60s in the Capital Region and as high as the mid 70s in the mid Hudson valley. The warmth, however, as is typical in March, was fleeting with the passage of a cold front early on the 15th. The front brought rain to the region on the 15th and a gradual drop in temperatures from the mid 50s during the pre-dawn hours down into the mid 40s by evening and the mid and upper 20s by midnight. An arctic air mass continued to deepen across southern Canada through the night of the 15th and morning of the 16th with a north to northeast wind effectively funneling the cold into New York and New England laying the ground work for snow from the developing coastal storm.

The storm itself largely evolved from a slow moving upper level low pressure system that had spent the week moving from the southwest, through Texas, then along the Gulf coast, and finally up into the north Georgia region by Friday morning, March 16. A second storm in the northern branch of the jet stream, located over the Dakotas on the 15th, steadily moved towards New York and New England through the day on the 16th. It was this low pressure system that eventually shaped the path and the configuration of the developing coastal storm which went on to produce the heavy snow that occurred here. Had this northern branch system been a little more vigorous and further east than it was, it would have interacted with the southern storm a little earlier in the game, likely causing the nor'easter to intensify more than it did, and potentially track it a little further west. This would have resulted in heavier snow totals a little further west, more similar to the Valentine's day storm. Instead, the northern branch storm was just a little late, which meant much of the coastal storm's rapid development occurred after it

went past Boston early Saturday morning, to late for it to curl back an extra burst of heavy snow into our region. Nevertheless, the moisture envelope that the storm brought up the coast along with a moderately strong and favorably configured upper jet stream flow was sufficient to produce a narrow ribbon of very heavy snow which set up directly over the Hudson valley and western New England due to the favorable track over eastern Massachusetts.

The fine dry snow that characterized the snow with this storm first developed during the mid morning across the southern Catskills, mid Hudson valley, and Litchfield county, CT, spreading north into the Capital Region by the early afternoon, then across the north country by the late afternoon. Snowfall rates quickly came up to between 1"-2" per hour in the eastern Catskills and mid Hudson valley by the late afternoon, with 1/2"-1" per hour rates into the Capital Region by evening. Very heavy snow, accompanied by gusty north to northeast winds up to 25 mph, persisted through midnight in Greene, Ulster, Columbia, Berkshire, Dutchess, and Litchfield counties,. As the strengthening low center approached towards midnight, enough mid level warm air circulated in to allow a change to sleet in parts of the mid Hudson valley to Berkshire county, with very heavy snow persisting just north of the mix line. Heavy snow, rates of 1"-2" per hour, spread north into the Saratoga region to Washington county and Vermont from midnight to 6am, with lighter snows further from the storm track over the Adirondacks, Mohawk valley, and western Catskills.

A pronounced dry slot between the surface storm and an upper air low pressure system to the west moved into eastern New York and western New England by 7am on Saturday the 17th causing an abrupt end to the snow as the system wound down with some patchy freezing drizzle and nuisance light snow ultimately ending by 10am. Mostly cloudy, breezy but dry conditions persisted through much of the day until the upper low approached during the mid afternoon and evening. The upper low spread a batch of light snow and snow showers back into the region lasting through midnight. Additional very light snow accumulations of a coating to an inch occurred with the passage of the upper low. By Sunday, the now powerful surface storm, which had brought the main dump of snow, was located up over the Canadian maritimes and created a strong pressure gradient over the Northeast resulting in frequent wind gusts up to 40 mph with very chilly temperatures in the low 30s.

The table lists the reported snowfall accumulations from WRGB's exclusive WeatherNet 6 spotter network for the March 16-17, 2007 Major Nor'easter (*Note: This table does not include any of the additional minor snow accumulations that occurred due to the passage of the upper level low pressure system during the evening of the 17th*)

Town	County	Snowfall Report	Town	County	Snowfall Report
Albany (NWS)	Albany	13.0"	Albany (Downtown)	Albany	13.25"-16.0"
Knox	Albany	12.25"	Colonie	Albany	14.5"
Menands	Albany	13.5"	Preston Hollow	Albany	15.5"
Latham	Albany	15.5"	Cohoes	Albany	15.0"
Alford, MA	Berkshire	16.0"	Lanesborough, MA	Berkshire	12.0"
Pittsfield, MA	Berkshire	15.0"			
Taghkanic	Columbia	17.6"	North Chatham	Columbia	22.5"
West Ghent	Columbia	22.5"	Chatham Center	Columbia	23.0"
Valatie	Columbia	22.0"	Ghent	Columbia	21.0"-23.0"
Ancramdale	Columbia	12.5"	Stuyvesant	Columbia	21.0"
Millerton	Dutchess	12.5"	Pine Plains	Dutchess	18.0"
Clinton Corners	Dutchess	18.0"	Union Vale	Dutchess	12.3"
Caroga Lake	Fulton	6.75"	Gloversville	Fulton	6.5"

Perth	Fulton	7.0"			
Kiskatom	Greene	18.5"	Prattsville	Greene	13.5"
Maplecrest	Greene	18.0"	Ashland	Greene	12.0"
Haines Falls	Greene	17.5"	Athens	Greene	17.0"
Halcott	Greene	18.0"	Coxsackie	Greene	16.5"
Catskills	Greene	16.2"	Windham	Greene	24.0"
Dolgeville	Herkimer	7.0"			
Wells	Hamilton	7.0"	Speculator	Hamilton	7.0"
Amsterdam	Montgomery	8.5"-9.0"	Palatine Bridge	Montgomery	6.0"
Fonda	Montgomery	7.2"	Canajoharie	Montgomery	7.0"
East Worcester	Otsego	8.5"	Worcester	Otsego	8.25"
Schaghticoke	Rensselaer	13.0"	Speigletown	Rensselaer	12.0"
Taborton	Rensselaer	17.0"	West Sand Lake	Rensselaer	15.0"
Schodack	Rensselaer	15.0"	Brunswick	Rensselaer	14.6"
East Nassau	Rensselaer	13.0"			
Porter Corners	Saratoga	14.0"	Wilton	Saratoga	12.5"
Gansevoort	Saratoga	12.5"- 15.25"	Middlegrove	Saratoga	10.0"
Galway	Saratoga	8.0"	Clifton Park	Saratoga	13.0"
Saratoga Springs	Saratoga	12.3"	Malta	Saratoga	12.5"
Duanesburg	Schenectady	11.0"	Delanson	Schenectady	15.0"
Scotia	Schenectady	12.0"- 14.0"	Glenville	Schenectady	12.5"
Schenectady	Schenectady	12.0"	Niskayuna	Schenectady	13.0"
Fulton	Schoharie	10.5"	Richmondville	Schoharie	12.0"
Middleburgh	Schoharie	16.0"	Jefferson	Schoharie	15.0"
Cobleskill	Schoharie	11.0"	North Blenheim	Schoharie	10.5"
Woodstock	Ulster	12.0"	Kingston	Ulster	14.7"
Whiteport	Ulster	16.5"	Phoenicia	Ulster	21.0"
West Shokan	Ulster	18.5"	Kerhonkson	Ulster	12.0"
Fort Edward	Washington	10.0"	Salem	Washington	12.0"
Granville	Washington	18.0"	Hebron	Washington	13.0"
Greenwich	Washington	14.0"	Argyle	Washington	12.0"
Bolton Landing	Warren	6.0"	Lake Luzerne	Warren	11.0"
Warrensburg	Warren	11.0"	Glens Falls	Warren	10.2"
Woodford, VT	Bennington	15.5"	Landgrove, VT	Bennington	12.5"
West Rutland, VT	Rutland	14.0"			

Photographer: WeatherNet 6 Weather Spotter Tim Melino, West Ghent, Columbia County: Saturday Morning, March 17, 2007, 22.5" of snow buried this car



**Photographer: WeatherNet 6 Weather Spotter Jim Meehan, Chatham, Columbia County: 23" of Snow, Saturday Morning, March 17, 2007**



**Photographer: WeatherNet 6 Weather Spotter Steve Meicht, Catskill, Greene County: 10pm, March 16, 2007, West Bringe Street and Broome Street during the storm. 11.5" of snow had accumulated at this point**



Photographer: WeatherNet 6 Weather Spotter Stephen Kondysar, Clinton Corners, Dutchess County: 11pm, March 16, 2007 during the storm. 16.5" of snow had accumulated at this point with heavy snow in progress

